

J. Wale inv.t et delin. C. Grignion sculp.

Duce Minerva.



J. Wale inv.t et delin. C. Grignion sculp.

Duce Minerva.

A NEW AND COMPLETE

DICTIONARY

OF

ARTS and SCIENCES;

COMPREHENDING ALL

The Branches of Useful Knowledge,

WITH

ACCURATE DESCRIPTIONS as well of the various MACHINES, INSTRUMENTS, TOOLS, FIGURES, and SCHEMES necessary for illustrating them,

AS OF

The Classes, Kinds, Preparations, and Uses of NATURAL PRODUCTIONS, whether ANIMALS, VEGETABLES, MINERALS, FOSSILS, or FLUIDS;

Together with

The KINGDOMS, PROVINCES, CITIES, TOWNS, and other remarkable Places throughout the WORLD.

Illustrated with above Three Hundred COPPER-PLATES, engraved by Mr. JEFFERYS, Geographer to His MAJESTY.

The Whole extracted from the Best AUTHORS in all Languages.

By a SOCIETY of GENTLEMEN.

The SECOND EDITION,
With many ADDITIONS, and other IMPROVEMENTS.

———————*Huc undique Gaza*
Congeritur ———————— VIRG.

VOL. I.

LONDON:
Printed for W. OWEN, at Homer's Head, in Fleet-street.
MDCCLXIII.

W. Musgrave.

MVSEVM
BRITAN
NICVM

THE INTRODUCTION.

AS mankind, in at leaſt all the polite and civilized parts of the world, are abundantly convinced of the ineſtimable value of Knowledge, we ſhall not detain the reader with needleſs encomiums of it; neither ſhall we enter upon a tedious hiſtory of the riſe and progreſs of the ſeveral Arts and Sciences. It appears to us much more intereſting, as well as more conducive to our preſent purpoſe, to employ the few pages allotted for an Introduction, in ſhewing how juſtly this work merits the title of a *Complete Dictionary of Arts and Sciences*: this we ſhall attempt to do, by briefly explaining the deſign and nature of the work, and afterwards giving a ſhort analyſis of the ſubject-matters contained in it.

In general, then, it is deſigned, and, upon examination, we are confident will be found, to be more univerſal and comprehenſive, than any work of the like nature, hitherto publiſhed in any language: for not only are the larger branches of ſcience, and general claſſes of natural objects, here explained and illuſtrated; but, likewiſe, their various ſubdiviſions purſued throughout the moſt minute ramifications: thus, the properties of Points and Atoms, for inſtance, are by no means omitted, though contained in much narrower bounds than thoſe of Lines, Angles, Surfaces, and Solids: here too the ſmalleſt Inſect and Plant find a place, only a leſs one than thoſe allotted for the deſcription of the Elephant and Oak: in a word, it will contain, ſo to ſpeak, the quinteſcence of literature, extracted from loads of groſs materials, and eſpecially from that chaos of words which fills up whole pages, where one paragraph might have ſerved. But this is not all; for beſides lopping off excreſcences, curtailing ſuperfluities, and wholly rejecting uſeleſs lumber, particular care has been taken to ſupply the deficiencies, as well as to correct what appeared to be amiſs in the plans of former ſcientifical lexicographers: hence it is that ſome of our articles are more full than theirs, others more conciſe, and a multitude of entirely new ones added; not to mention the different arrangement and diſpoſition which obtain on many occaſions. Among the new articles may be ranked moſt, if not all, the geographical ones, many commercial and ſcientifical, and not a few in natural hiſtory.

This work, therefore, will make a *Complete*, though conciſe, *Body of Arts and Sciences, Natural Hiſtory, and Geography*, diſpoſed in the commodious form of a dictionary; concerning which form we find ourſelves obliged to remark, that ſome have very injudiciouſly condemned the uſe of references. A thouſand inſtances might be brought, to prove their being indiſpenſibly neceſſary to the perfection of ſuch a work: thus, under the general article ANIMAL, after defining what is meant by the term, and diſtributing it into the claſſes QUADRUPEDS, BIRDS, FISHES, *&c.* the nature of a dictionary, which treats of every thing under diſtinct articles, makes references to theſe heads, for the particular deſcription and ſubdiviſions of each, not only uſeful, but an eſſential part of the work. On the other hand, to avoid needleſs repetitions, it has been judged ſufficient,

ficient, under particular articles, HORSE, for example, to ſay that it is an animal of the claſs of quadrupeds, and order of the jumenta, or beaſts of burden; taking care to give the characteriſtical peculiarities that diſtinguiſh it from all other animals, and refer to the articles ANIMAL, QUADRUPED, and JUMENTA, for its general and claſſical characters, or thoſe it has in common with other animals of the ſame claſs and order. What has been ſaid of Animal and Horſe, will hold equally with reſpect to other articles; thus, from ARITHMETIC and ALGEBRA we refer to ADDITION, SUBTRACTION, MULTIPLICATION, &c. and from theſe back again to ARITHMETIC and ALGEBRA, for the general account of theſe ſciences. This double reference, like a double entry in merchants books, is that bond of union whereby the various and frequently very diſtant parts of the work are connected together, and an harmony, ſimplicity, and order eſtabliſhed, without which all would be confuſion and diſcord. But beſides this neceſſity of ſymmetry, ariſing from the nature of the work, the caprice of authors, in coining a multiplicity of names for the ſame object, has ſubjected lexicographers to the cruel and almoſt endleſs taſk of explaining the various terms they have uſed for one and the ſame thing. Now the only poſſible method of doing this in an accurate and ſcientifical manner is to deſcribe every ſuch object under a ſelect name, and refer from the other ſynonymous terms to that head, for the deſcription.

It remains now to ſay ſomething of the ſources, whence the materials of this work have been drawn: and, indeed, theſe are too numerous to be particularly mentioned; all helps, from whatever quarter, having been uſed with the utmoſt freedom. Dictionaries, tranſactions, memoirs, ſyſtems, commentaries, practices, and even eſſays, elements, and grammars have contributed their ſeveral quotas. Theſe, like ſo many rich mines, have furniſhed ample materials for erecting this new edifice; in which, however, they are ſo transformed and new-modelled, in order to fit them for their reſpective places, that it would be both tedious and uſeleſs to refer to the originals on every occaſion. This, nevertheleſs, we have always taken care to do when neceſſary; never failing to point out the beſt authors on each art and ſcience, and refer the curious to books where farther information on the moſt intereſting ſubjects may be obtained.

With reſpect to the copper-plates, it is ſufficient to obſerve, that they muſt greatly enhance the merit of the work; ſince, without them, the moſt accurate deſcriptions ſeldom convey ſuch diſtinct ideas of things as could be wiſhed. On the other hand, the deſcriptions ſerve to explain the copper-plates: for though the engraver has, indeed, with much ingenuity, delineated the many mathematical ſchemes, figures, machines, inſtruments, animals, plants, and other curious productions of art and nature, ſelected for the illuſtration and embelliſhment of this work; yet their properties, conſtruction, and various uſes muſt be learned from the deſcription given of them under their reſpective articles.

Having thus, in few words, explained the deſign and nature of our undertaking, we ſhall next proceed to lay down a plan of the ſubject-matter: but as this is a taſk of no ſmall difficulty, it will be neceſſary, in order to aſſiſt our own as well as the reader's imagination, to ſubjoin the Table or Scheme of Knowledge; by which, as by an intellectual compaſs, we have ſteered our courſe through the vaſt ocean of literature. It is conſtructed upon a very different plan from all that have fallen within our notice: that of Mr. Chambers has been generally diſliked, as too ſcholaſtic and abſtracted; and even that of the great Bacon, with all the improvements of the ingenious authors of the french Encyclopædia, is, in our opinion,

opinion, too complicated, inasmuch as it blends the consideration of the human soul with that of the objects of its knowledge. On this last foundation it is that the annexed general Scheme of Human Knowledge has been drawn up; which, we flatter ourselves, has the advantage of any of those before-mentioned, not only as being more simple and natural, but likewise fuller and more accurately distributed.

This scheme is branched out, first into the General and Particular objects of Knowledge: under the former, or general branch, are comprehended Metaphysics, Ontology, or First Philosophy; which are again subdivided into general Pneumatology, Physics, Mathematics, Physiology, and Chronology: all which are either employed about the essences or general attributes of Beings, as will be explained afterwards. Under the second grand branch of knowledge are comprehended all particular objects, subdivided into Divine, Human, Natural, and Artificial; the first whereof includes all that we know about God and matters of religion; the second, all that more immediately regards Mankind, whether considered as Individuals, or Members of Society; the third, all Natural objects, from the Sun, Stars, and Planets, to the most minute Insect and Atoms of our earth; and the fourth, all works of Art; which, notwithstanding their manifest connection with the second branch, we have judged expedient to arrange under a separate and distinct class, for this reason, that as the admirable works of the great Author of nature are considered separately from Theology, so may the comparatively diminutive, though at the same time curious and useful, productions of human Art be considered separately from Mankind themselves. As to the many subdivisions of each of these larger branches, they may be seen in the scheme itself; which, being drawn up with no inconsiderable application and study, is submitted to the judgment of the learned, who at least cannot fail to approve of our endeavours to please them; since this desire, added to that of finding a cue to guide us through the intricate mazes of literature, was what set us upon compiling it.

We will now take a general survey of the Arts and Sciences, and as they pass in review before us, point out the most important branches treated of under each of them; which, at the same time that it serves as a farther illustration of the Scheme here referred to, will be a brief analysis of this work.

(1) METAPHYSICS, ONTOLOGY, or FIRST PHILOSOPHY, undoubtedly constitute the most sublime of all sciences, as treating of the essence and universal affections of all beings. To be a good metaphysician, one must first be a good divine, a good philosopher, and, in short, a thorough proficient in every branch of particular knowledge; he must have distinct and adequate ideas of the nature and manifold properties of beings in general; otherwise in classing, distinguishing, and variously arranging them, he must unavoidably fall into the grossest blunders: we have, therefore, endeavoured to explain the various opinions of the learned concerning Essence, Substance, Cause, Effect, Possibility, Necessity, Power, Duration, Number, Finite, Infinite, Category, Predicament, Genus, Species, &c.

(2) PNEUMATOLOGY, called also PNEUMATICS, is one great and important branch of metaphysics, which treats of spiritual beings, their powers, attributes, &c. whence arise a great many curious articles, as Spirit, God, Angel, Soul, Mind, Understanding, Idea, Perception, Judgment, Reasoning, Reflection, Sensation, &c. also Knowledge, Science, Will, Memory, Imagination, &c. all treated of in their several places.

(3) PHYSICS,

(3) PHYSICS, another great branch of Metaphyſics, to which belongs the explanation of the general properties of corporeal beings, is ſubdivided into Mathematics and Phyſiology.

(4) MATHEMATICS treat of Number, Figure, and Magnitude; and hence the ſubordinate ſciences, Arithmetic, Algebra, and Geometry: the great excellency of all which is owing to this, that as we have more diſtinct and determinate ideas of their principles, ſo likewiſe is the knowledge thence ariſing more preciſe and certain than that of moſt other ſciences.

(5) ARITHMETIC is conſidered not only with reſpect to its fundamental operations, Addition, Subtraction, Multiplication, and Diviſion; but likewiſe the rules of Proportion, Intereſt, Fellowſhip, Rebate and Diſcount, Tare and Tret, Fractions vulgar and decimal, Reduction, Involution, Extraction of roots, Alligation, Progreſſion both arithmetical and geometrical, Arithmetic of infinites, Logarithms, &c. of all which, both the principles and practice are explained in the moſt diſtinct manner, and illuſtrated by proper examples.

(6) ALGEBRA, by ſome called literal or univerſal arithmetic, very properly occupies the next place, as ſerving to reſolve all manner of problems by the ſame fundamental operations of addition, ſubtraction, multiplication, &c. But beſides theſe it contains a great many others, very different from thoſe of arithmetic; ſuch are Equation, Quadratic, Biquadratic, Cubic, Binomial, Surd, Conſtruction, Coefficient, Limit, &c. alſo many in common with it, as Proportion, Series, Approximation, Involution, Evolution, Fraction, &c.

(7) GEOMETRY, another moſt comprehenſive as well as uſeful branch of mathematics, is conſidered as divided into elementary or common, and higher; the firſt, or elementary part, may be conveniently ſubdivided into, 1. Planimetry, or the menſuration of plain figures, their length, breadth, angles, diameters, diagonals, areas, &c. hence the articles Line, Triangle, Square, Parallelogram, Polygon, Circle, Ellipſis, Parabola, Hyperbola, Surface, Surveying, &c. the properties of all which are explained in their places, as are alſo the figures and uſes of the inſtruments employed in deſcribing or meaſuring them, as Ruler, Compaſſes, Quadrant, Theodolite, Circumferentor, Plane-table, Chain, Scale, Protractor, Perambulator, &c. 2. Stereometry, or the menſuration of ſolids; which may be ſtudied under the articles Cube, Parallelopiped, Priſm, Pyramid, Globe, Sphere, Spheroid, Cylinder, Cone, Fruſtum, Gauging, Sector, Sliding-rule, Gauging-rod, &c. As to the higher Geometry, it may be learned under the articles Curve, Curvature, Tranſcendental, Ciſſoid, Conchoid, Cycloid, Cauſtic, &c.

(8) TRIGONOMETRY is that branch of geometry which teaches the menſuration of triangles, whether plain or ſpherical; hence a variety of articles, as Angle, Degree, Sine, Tangent, Secant, Radius, Triangle, Baſe, Perpendicular, Hypothenuſe, &c. all explained in their places. And as to the menſuration and properties of ſpherical triangles, they will be found under the articles Triangle and Spherical.

(9) SPHERICS contain the doctrine of the Sphere, the area of its ſurface, its ſolidity, formation, projection, &c. whence the articles Orthographic, Stereographic, Analemma, Planiſphere, Pole, &c.

(10) CONICS, another branch of geometry, treat of the conic ſections, as Circle, Ellipſis, Parabola, and Hyperbola: whence a variety of articles, as Axis, Aſymptote, Abſciſs, Focus, Parameter, Ordinate, Diameter, &c. all treated of under their ſeveral articles.

(11) PHYSIOLOGY, or NATURAL PHILOSOPHY, a ſcience of vaſt extent, is univerſally acknowledged to be the moſt ſublime, moſt entertaining, and at the ſame time moſt uſeful part of ſpeculative knowledge, relating to natural objects. It has for its object the Laws and various Phænomena of Nature; whence ariſe the articles Matter, Body, Extenſion, Solidity, Fluidity, Diviſibility, Inertia, Motion, Gravity, Attraction, Coheſion, Electricity, Magnetiſm, Elaſticity, Hardneſs, Softneſs, Malleability, Heat, Light, Cold, Froſt, Condenſation, Rarefaction, Fermentation, Generation, Vegetation, Cryſtallization, Nutrition, Putrefaction, Rain, Thunder, Hurricane, Cloud, Meteor, Rain-bow, Summer, Winter, Sound, Taſte, Colour, Smell, &c. In ſhort, this ſcience may be looked upon as the baſis of all Natural and Artificial Knowledge, and even of Human, ſo far as it regards the body.

(12) DYNAMICS conſtitute a branch of phyſiology, to which belongs the conſideration of the Laws of Motion, of Percuſſion, of Action and Reaction, of Force, Acceleration, Retardation, Direction, Velocity, Central Forces, Springs, Powers, Weights, &c.

(13) MECHANICS are another branch of Phyſiology, which treat of the Equilibrium and Combination of Powers; and hence the ſimple machines called the Mechanical Powers, *viz.* Lever, Ballance, Axis in Peritrochio, or Axis and Wheel, Pulley, Wedge, Screw, and Inclined Plane: of theſe are all manner of compound engines and machines conſtructed; ſome conſiſting of ſeveral levers; others, of levers, ſcrews, and wheels; and others, of all the ſimple powers, variouſly combined. Hence the articles Friction, Friction-wheels, Clock, Watch, Water-works, Wind-mill, Water-mill, Crane, Capſtan, Windlas, Pile-engine, Silk-engine, Orrery, &c.

(14) CHRONOLOGY is employed about Time, and comprehends not only the larger periods, as the Julian and Victorian Periods, the Chriſtian Æra, the Hegira, Spaniſh Æra, &c. but likewiſe its leſſer diviſions, as Hour, Day, Week, Month, Year, Olympiad, Luſtrum, Cycle, Age, Century. Hence alſo a variety of articles, relating either to the methods of computing time, or the inſtruments for meaſuring it, as Faſti, Calendar, Almanac, Eaſter, Epact, Golden Number, Style, Julian, Gregorian, Indiction, Dial, Watch, Clock, Water and Sand-glaſſes, &c. all explained in their proper places.

(15) THEOLOGY, conſidered as a branch of Pneumatology, treats of the Being and Attributes of God, and is either Natural or Supernatural, according as its principles are derived from Reaſon or Revelation; hence alſo the articles Eternity, Omnipotence, Omniſcience, Ubiquity, Creation, Providence, &c.

(16) RELIGION is of much greater extent, as comprehending the Creeds, Feſtivals, Ceremonies, and Rites of the almoſt numberleſs ſects to be found among Chriſtians, Jews, Mahometans, and Pagans. Our general diviſion of theſe is into True and Falſe; Chriſtianity and Judaiſm being ranked under the former, and Mahometaniſm and Paganiſm under the latter: however, to prevent

vent being miſunderſtood, let it be remarked, that we do not mean this of Judaiſm as profeſſed by the modern Jews, but ſuch as it was before the coming of our Saviour, and as delivered in the Old Teſtament; for as to modern Judaiſm, it is perhaps more abſurd than Mahometaniſm.

The principal articles treated of, under this head of Religion, may be claſſed in the following manner, 1. The various Sects, as Proteſtants, Papiſts, Arians, Arminians, Socinians, Brachmans, Gymnoſophiſts, &c. 2. The Rites and Ceremonies, as Baptiſm, Euchariſt, Ordination, Circumciſion, &c. 3. The different kinds of Worſhip, as Adoration, Prayers, Pſalmody, Sacrifice, &c. 4. The Feſtivals, as Chriſtmas, Eaſter, Pentecoſt, Paſſover, Bacchanalia, &c. 5. The Faſts, as Lent, Ramadan, &c. 6. The ſacred Books, as Bible, Alcoran, &c. 7. The ſacred Miniſters, as Prieſt, Biſhop, Muſti, Dervis, &c. 8. Places and Utenſils of worſhip, as Church, Chapel, Temple, Moſque, Altar, &c. all which are explained in the order of the alphabet.

(17) ANTHROPOLOGY includes the doctrine of Human Nature, conſidered in general; the Rank which mankind hold in the Creation; the Union of Soul and Body, and the Laws thereof; the Immateriality, Rationality, and Immortality of the Soul; the unalienable Rights and Privileges of every individual, as Self-preſervation and Liberty; the Faculties and Deſires common to the whole human race, as Underſtanding, Deſire of Happineſs, Sociability, &c.

(18) LOGIC, a ſcience much cultivated both by antient and modern philoſophers, and juſtly held in the higheſt eſtimation, has the Faculty of the Human Underſtanding for its object, and is conſequently but a branch of anthropology. It conſiders the Origin of Human Knowledge, ſhews how Ideas or Notions are formed, compares them to diſcover their Agreement or Diſagreement, teaches the Rules of Ratiocination, and explains the Methods purſued in the Inveſtigation of Truth. Hence ariſe a multitude of important articles, as Perception, Idea, Senſation, Reflection, Abſtraction, Compoſition, Diviſion, Judgment, Propoſition, Affirmative, Negative, Univerſal, Particular, Abſolute, Conditional, Self-evident, Argument, Axiom, Principle, Syllogiſm, Terms, Premiſes, Concluſion, Figure, Mode, Sorites, Dilemma, Sophiſm, Enthymeme, Truth, Falſhood, Evidence, Demonſtration, Method, Analyſis, Syntheſis, &c.

(19) PERSONAL ETHICS, called by Bacon the Georgics of the Mind, have the Faculty of the Will for their object, and conſequently are only a branch of anthropology, concerning which we cannot affirm what has been ſaid of logic, ſince philoſophers have only conſidered it as a ſubdiviſion of General Ethics, under the title of the Duties of Man to himſelf. Some, indeed, at the head of whom may be placed Lord Shafteſbury and Hutcheſon, have treated of the Balance of the Affections, the Power of the Paſſions, and the Beauty of Virtue and Goodneſs; yet ſtill a regular and ſyſtematical treatiſe on this ſubject ſeems to be much wanted. We have explained the various terms Anger, Averſion, Hatred, Deſire, Hope, Joy, Pleaſure, Pain, Good, Evil, Paſſion, Appetite, Abſtinence, Temperance, &c. under their reſpective articles.

(20, 21) HIEROGLYPHICS and HERALDRY are ſiſter-arts, whereof the firſt, by various Symbols and Emblems, tends to preſerve the memory of divine objects of knowledge, whether doctrines, offices, or rites; and the latter, by the like means, perpetuates the honours of great men and families. Every religion is furniſhed with a peculiar ſet of Hieroglyphics, or myſtical repreſentations.

The

The Egyptians of old were famous for them; the feſtivals of the Greeks and Romans were full of them; and even the chriſtian and jewiſh religions are not without them, witneſs Baptiſm, Circumciſion, Crucifixes, Surplices, &c. However, it muſt be confeſſed, that the doctrine of Hieroglyphics is by no means reduced to a ſyſtem; which is the reaſon that though we have given the beſt information in our power on all theſe and the like heads, yet not with ſuch preciſion as we could have wiſhed. With reſpect to Heraldry, the caſe is quite otherwiſe; here we have explained the ſeveral Ordinaries, Charges, Colours, Metals, and Bearings; whence ariſe the articles Bar, Bend, Chief, Croſs, Bordure, Pale, Saltier, Quarter, Dexter, Siniſter, Or, Argent, Azure, Eſcutcheon, Shield, Creſt, Supporters, Blazoning, &c. all which are deſcribed in their places, and the figures of moſt of them curiouſly engraved in the copper-plates.

(22, 23) GRAMMAR and HISTORY are alſo kindred branches of human knowledge, ſerving to perpetuate the memory of facts and inventions, and ſpread the knowledge of arts and ſciences: the firſt we have conſidered as divided into four parts, Orthography, Etymology, Syntax, and Proſody; whence ariſe the articles Letter, Vowel, Conſonant, Word, Particle, Subſtantive, Adjective, Pronoun, Verb, Active, Paſſive, Adverb, Prepoſition, Interjection, Conjunction, Number, Caſe, Declenſion, Perſon, Mood, Tenſe, Concord, Regimen, Verſe, Proſe, Accent, Pronunciation, Primitive, Derivative, Simple, Compound, Regular, Irregular, Language, Hebrew, Greek, Latin, Engliſh, German, French, &c. As to Hiſtory, we have conſidered it as divided into Civil, Eccleſiaſtical, Natural, and Literary; hence the articles Dictionary, Syſtem, Abridgement, Elements, Synopſis, and many of thoſe enumerated under the heads Government, Religion, and Natural Hiſtory.

(24, 25) RHETORIC and POETRY are two liberal arts which owe moſt of their captivating charms to a good Imagination, or Genius; and, indeed, without the aid of this faculty, it is impoſſible to excel in any one art or ſcience whatever. Under Poetry come the articles Poem, Epic, Dramatic, Lyric, Ode, Hymn, Pſalm, Song, Satire, Elegy, Epigram, Tragedy, Comedy, Prologue, Epilogue, Soliloquy, Protaſis, Epitaſis, Cataſtrophe, Act, Scene, Paſtoral, Farce, Hexameter, Pentameter, Iambic, Sapphic, Adonic, &c. And to Rhetoric may be referred the articles Elocution, Action, Diſpoſition, Exordium, Narration, Confirmation, Peroration, Figure, Trope, Exclamation, Apoſtrophe, Epiphonema, Metaphor, Allegory, Hyperbole, Style, &c.

(26) MUSIC, another art depending upon imagination, we have explained in the conciſeſt manner conſiſtent with perſpicuity; the terms are not only defined, but the grounds of Harmony accounted for; and both antient and modern Muſic illuſtrated under a variety of articles, as Diagram, Chord, Character, Scale, Interval, Cleff, Baſs, Tenor, Treble, Genus, Chromatic, Enharmonic, Diatonic, Gamut, Solfaing, Temperament, Tone, Note, Second, Third, Fourth, Fifth, Sixth, Seventh, Octave, Diateſſaron, Diapente, Diapaſon, Allegro, Andante, Trumpet, Flute, Organ, Harpſichord, Violin, &c.

(27) ARTS, in general, might be referred to the imagination; but we chooſe rather to claſs them according to the various uſes they are intended to ſerve, as may be ſeen afterwards.

(28) ANATOMY has the conſtituent parts of the human body for its object, which the reader will find conciſely and diſtinctly explained in their places, ſuch are Head, Breaſt, Thorax, Abdomen, Arm, Leg, Artery, Vein, Nerve,

Muſcle, Bone, Gland, Heart, Stomach, Spleen, Liver, Lungs, Gall, Blood, Chyle, Aorta, Carotids, Subclavian, Spermatic, Epigaſtric, Vena Cava, Porta, Jugular, Hand, Foot, Cartilage, Articulation, &c.

(29) MEDICINE has the Health of mankind for its object, and therefore is employed either in preventing or curing the many diſeaſes to which they are liable; in treating of which we have only briefly touched upon Ætiology, Diagnoſtic, and Prognoſtic Signs, in order to make room for the Therapeutic part, or method of cure. Many are the articles belonging to this ſubject, but the moſt conſiderable are theſe, Diſeaſe, Symptom, Prognoſtic, Diagnoſtic, Pulſe, Urine, Criſis, Regimen, Fever, Agues, Gout, Rheumatiſm, Peripneumony, Pleuriſy, Apoplexy, Epilepſy, Palſy, Polypus, Palpitation of the Heart, Madneſs, Hydrophobia, Convulſions, Conſumption, Scurvy, Dropſy, Colic, Plague, Leproſy, Diarrhœa, Dyſentery, Eryſipelas, &c.

(30) PHARMACY, an art ſubſervient to medicine, treats of the Uſes and Preparations of all medicinal Drugs, whether ſimple or compound, natural or artificial; theſe are of different kinds, as Earths, Salts, Sulphurs, Metals, Plants, Animal Subſtances, Oils, &c. and are arranged under different claſſes, according to their different qualities, and curative intentions, as Evacuants, Alteratives, Aſtringents, Styptics, Cathartics, Emetics, Emollients, Narcotics, Sudorifics, Diaphoretics, Cardiacs, Vulneraries, &c. The Simples belonging to each of theſe are deſcribed with exactneſs, the Preparations explained, and the Virtues enumerated, as delivered in the beſt Diſpenſatories and writers on the Materia Medica: In order to be convinced of this, the Reader needs only conſult the articles Amber, Ammoniac, Balſam, Scammony, Aloes, Almonds, Cinnamon, Saſſafras, Jalap, Bole, Cinnabar, Rhubarb, Manna, Guaiacum, Colocynth, Sena, Opium, Muſk, Electuary, Extract, Tincture, Syrup, Troche, Pill, Mithridate, Theriaca, &c.

(31) CHEMISTRY is an article ſubſervient indeed to medicine, but by no means confined to that branch: it teaches the methods of preparing the different kinds of Salts, Oils, Amalgamas, Calxes, Crocuſes, Reguluſes, Sublimates, Spirits, &c. uſed in medicine; alſo the Smelting, Refining, and variouſly ordering of Metals for the common uſes of life: ſo that to Chemiſtry may be referred the many operations of Smithery, Coinage, Plumbery, Foundery, &c. To it likewiſe belong the arts of making Glaſs, Lime, Soap, Pot-aſhes, Malt, Beer, Wines, Vinegar, Dying, Enamelling, Etching, Tanning, &c. Hence a multitude of extremely uſeful articles, as Calcination, Diſtillation, Sublimation, Rectification, Solution, Menſtruum, Cryſtallization, Precipitation, Brewing, Fermentation, Clarification, Amalgamation, Fluxes, Alkaheſt, Aqua fortis, Aqua regia, Furnace, Crucible, Retort, Coppel, Muffle, &c.

(32) SURGERY, another art ſubſervient to medicine, teaches the ſeveral manual operations, as well as the treatment of the various external accidents and diſorders to which mankind are ſubject; hence the articles Amputation, Cæſarian Section, Cutting for the Stone, Phlebotomy, Scarification, Inciſion, Wound, Ulcer, Abſceſs, Tumour, Aneuriſm, Fracture, Luxation, Cancer, Gangrene, Mortification, Venereal Diſeaſe, Piles, Rickets, Ruptures, &c. alſo the inſtruments uſed for this purpoſe, as Knives, Lancets, Sciſſars, Catheters, Bandages, Truſſes, Probs, Spatula, Needles, Ambe, Tournequet, &c.

(33, 34) COSMETICS and GYMNASTICS have the beauty and vigour of the body for their objects. Coſmetics imply the art of improving the complexion;

and Gymnaſtics, of rendering the body robuſt and active by a courſe of proper exerciſes. Among the articles belonging to theſe ſubjects may be reckoned, Dentifrices, Waſhes, Creams, Salves, coſmetical Waters, Walking, Riding, Running, Bowling, Boxing, Wreſtling, Fencing, Dancing, &c.

(35) GENERAL ETHICS, or MORALITY, comprehend the Duties which Mankind owe to each other, independently of poſitive inſtitutions, or the laws of particular ſocieties; all comprized under the golden maxim, of treating others as we would wiſh they ſhould treat us, were we in their circumſtances. Hence ariſe the articles Hoſpitality, Truth, Juſtice, Humanity, &c. alſo the oppoſite vices, Inhoſpitality, Pride, Barbarity, Injuſtice, Falſehood, &c.

(36) LAW treats of the poſitive regulations of ſociety, for preſerving peace and good order, and the maintenance of juſtice. It explains the Rights and Privileges of every member, whether Nobleman or Commoner, Clergyman or Layman; and ſpecifies the penalties, which the infringers of thoſe Rights incur. Every ſtate has peculiar laws of its own; thus the Romans had their Civil Law, ſtill of great account in moſt nations of Europe; the French, the Salic Law, and the arrets of their arbitrary monarch; and, to mention no more, Great Britain is bleſſed with laws enacted by the joint conſent of the King, Lords, and Commons. Many are the articles which come under this head, as Statute, Act, Decree, Charter, Corporation, Clergy, Freehold, Manor, Copyhold, Bill, Bond, Will, Guardian, Executor, Adminiſtrator, Leaſe, Deviſe, Livery, Indictment, Felony, Treaſon, Judge, Jury, Challenge, Habeas Corpus, Court, Chancery, King's Bench, Common Pleas, Court of Requeſts, Plea, Treſpaſs, Attachment, Capias, &c.

(37) GOVERNMENT very properly comes after Law, being only a power, lodged in the hands of one or more magiſtrates, to carry the laws into execution. 1. With regard to its different forms, and ſupreme magiſtrates, we have treated of Ariſtocracy, Democracy, Oligarchy, Monarchy, Arbitrary, Free, Mixed, Elective, Hereditary, Emperor, King, Conſul, Archon, Senate, Sultan, Sophi, Czar, Caliph, Cæſar, Dictator, Prince, Protector, &c. 2. Its branches and ſubordinate magiſtrates, whether civil, eccleſiaſtical, or military; whence Archbiſhop, Biſhop, Dean, Chancellor, Chief Juſtice, Mayor, Alderman, Sheriff, Bailiff, Juſtice of Peace, General, Admiral, Colonel, Captain, Army, Navy, Militia, Parliament, Privy Council, Exchequer, Secretaries of State, War-Office, Board of Trade and Plantations, Board of Works, Poſt-Office, Commiſſioners of the Admiralty, Cuſtoms, Exciſe, Stamp-Duties, &c.

(38) COMMERCE we have conſidered as one of the moſt uſeful and neceſſary parts of the whole work, and therefore have treated it with more than ordinary fulneſs. The natural productions, manufactures, and various commodities concerned in trade, are here accurately deſcribed; and the marks whereby to diſtinguiſh the good from the bad, and the genuine from the ſophiſticated, particularly mentioned: ſuch are the Ores of metals, Diamonds, and other precious ſtones, Drugs for medicine, painting, or dying, Spices, Grains, Salts, Sulphurs, Earths, Woods, Fruits, Silk, Cotton, Wool, Hair, Cloths, Linens, Stuffs, Hard-ware, Glaſſes, China and Earthen-ware, &c. The reader will likewiſe find the conſtitution and privileges of the ſeveral Companies eſtabliſhed in Europe for the carrying on foreign trade; the laws and cuſtoms among Merchants, for the inſuring of ſhipping and merchandize; the conſtitution of the ſeveral Banks, with an account of their bank and current monies, as alſo of their agios, and the method of converting bank money into current money; the ſtandards of gold and ſilver, and the par of foreign coins with reſpect to their intrinſic value, the

monies both of coin and account, weights and meaſures of our own and other countries; the practical part of Commerce, relating to Buying, Selling, Freighting, Factorage, Cuſtoms, Duties, Bounties, Drawbacks, Bills of Exchange, &c. and laſtly, an explication of all the technical terms and phraſes relating to foreign or domeſtic trade, together with the lateſt improvements in the art of book-keeping.

(39) ASTRONOMY, as is more fully ſhewn under its proper article, treats of the Univerſe, and particularly our Solar Syſtem; explains the cauſes of the planetary motions, the times of their revolutions, their diſtances, magnitudes, &c. together with the various phænomena which thence ariſe, as Conjunction, Oppoſition, Eclipſe, Aphelium, Perihelium, Summer, Winter, &c. The articles belonging to this ſcience, which are indeed very numerous, may be claſſed under the following heads: 1. The Bodies themſelves, Sun, Moon, Earth, Venus, Mercury, Mars, Jupiter, Saturn, Satellites, Comets, fixed Stars. 2. Syſtems concerning them, as Copernican, Ptolemaic, Tychonic, &c. 3. Conſtellations, or aſſemblages of the fixed ſtars, as the twelve ſigns, Aries, Taurus, Gemini, &c. Urſa major and minor, Andromeda, Caſſiopeia, Hercules, Argo, Perſeus, Lyra, Triangle, Sagitta, Pegaſus, &c. 4. Terms and particular branches of this ſcience, as Sphere, Equinoctial, Meridian, Horizon, Zenith, Nadir, Azimuth, Vertical, Ecliptic, Zodiac, Aſcenſion, Declination, Longitude, Altitude, Amplitude, Orbit, Node, Phaſes, Parallax, Stationary, Retrograde, Preceſſion, Aberration, Occultation, Penumbra, &c. 5. Inſtruments, as Globes, Armillary-ſphere, Planetarium, Orrery, Teleſcopes, Micrometer, Quadrants, Aſtrolabe, &c. the deſcription of all which is illuſtrated by proper ſchemes and figures.

(40) GEOGRAPHY is only a branch of Coſmography, which, having the deſcription of the terraqueous globe of our Earth for its object, may be comprehended under three general heads. 1. Natural Geography, which treats of its figure and natural diviſions; whence ariſe Earth, oblate Spheroid, Continent, Peninſula, Iſthmus, Mountain, Promontory, Iſland, Ocean, Sea, Gulph, Lake, River, Straits, &c. 2. Political Geography, which is again ſubdivided into civil and eccleſiaſtical; the former containing a deſcription of the political diviſions of the earth into Empires, Kingdoms, Principalities, Provinces, &c. whence the articles Germany, China, Muſcovy, France, Spain, &c. and the latter, an account of the eccleſiaſtical diviſions of it, as Patriarchate, Archbiſhopric, Biſhopric, Pariſh, &c. 3. The Inſtruments and technical terms; as Globe, Map, Equator, Meridian, Pole, Horizon, Longitude, Latitude, Climate, Zone, Amphiſcii, Aſcii, Periſcii, Antipodes, &c.

(41) NATURAL HISTORY conſtitutes a branch of knowledge, on which depends the very life and well-being of mankind: for ſo cloſe is our connexion with the various productions of mother-earth, that whilſt ſome ſerve us for food and medicine, and others for dreſs and ornament, there are others which ſupply our manifold neceſſities, ſhelter us from the inclemency of the weather, defend us from the hoſtile attacks of our enemies, whether of the human or brutal kind, waft us over immenſe oceans, and, in ſhort, procure us all the conveniencies as well as neceſſaries of life. It is from our acquaintance with this ſtudy, that we derive any advantage from the ſtrength of the ox, the ſwiftneſs of the horſe, the ſagacity and fierceneſs of dogs, the fleece of the harmleſs ſheep, the furs of the ſable and ermine-animals, or the ſeveral productions of thoſe uſeful inſects, the bee, ſilk-worm, and cochineal. The vegetable world is no leſs ſubſervient to the purpoſes of human life. With what profuſion does it furniſh our tables! The mineral kingdom likewiſe contributes its ſhare. Who knows

knows not the uſe of Gold and Silver, of Iron and Copper, of Tin and Lead, of Diamonds and other ſtones, or of Salts and Sulphurs? To theſe we have added a fourth branch more neceſſary than either the animal, vegetable, or mineral kingdoms. Water, Air, and Fire, are the common bleſſings of heaven; without which animal life could not be ſuſtained, plants grow, or, perhaps, minerals be formed. No wonder, therefore, that mankind ſhould proſecute this ſtudy with unwearied application! No wonder, if they erect monuments to thoſe who make new diſcoveries in it!

(42) ZOOLOGY, or the ſcience of Animals, is ſubdivided into ſix branches: 1. Quadrupeds, whence Lion, Elephant, Horſe, Camel, Rhinoceros, Ox, Sheep, Bear, Tiger, Bat, Squirrel, &c. 2. Birds, as Eagle, Hawk, Peacock, Swan, Duck, Dove, Heron, Pelican, Phoenicopterus, Cock, Pheaſant, Thruſh, Lark, &c. 3. Amphibious animals, capable of living in water as well as on land: ſuch are the ſeveral kinds of Serpents, Snakes, Lizards, Frogs, Tortoiſes, &c. 4. Fiſhes, whereof ſome have the tail parallel to the horizon, as the Whale-kind, the Dolphin, Porpeſſe, Phyſeter, &c. Some have the rays of their fins cartilaginous, as the Ray-fiſh, Dog-fiſh, Shark, Sturgeon, Iſinglaſs-fiſh, &c. Others have fins with bony and prickly rays, as the Pearch, Gurnard, Ruffe, Sea-Bream, &c. Some again have fins with bony, but not prickly rays: ſuch are the Sand-eels, Turbot, Whiting, Cod, Haddock, Eel, Conger, Salmon, River-bream, Chub, &c. And, finally, others have bony fins, but no oſſicles or ſmall bones in the branchioſtege membrane, as the Sun-fiſh, Lump-fiſh, Toad-fiſh, &c. 5. Inſects, whereof ſome are naked, as the Worm, Leech, Gally-worm, Centipes, Milleſpes, &c. Others are furniſhed with one or two pair of wings as the Bee, Fly, Beetle, Butterfly, Locuſt, &c. 6. Animalcules, viſible only by the aſſiſtance of microſcopes, of which there are ſeveral kinds.

Subordinate to Zoology are ſeveral arts, which contribute both to profit and pleaſure, as Farriery, Horſemanſhip, Hunting, Fowling, Fiſhing, the management of Cattle, of Fiſh, of Bees, of Silk-worms, of the Kermes and Cochineal Inſects, &c. whence ariſe a multitude of uſeful articles, as Mange, Farcin, Halting, Gelding, Curvet, Volt, Capriole, Ferreting, Hawking, Net, Hound, Beagle, Angling, Cow, Calf, Mare, Foal, Sheep, Lamb, Hog, Pig, Poultry, Bee, Swarm, Hive, Honey, Silk-worm, Kermes, Cochineal, &c.

(43) BOTANY treats of the claſſes, characters, parts and virtues of plants: whence ariſe many thouſands of articles, as Seed, Flower, Fruit, Root, Trunk, Branch, Wood, Bark, Leaf, Oak, Vine, Sage, Apple, Cherry, Tulip, Violet, Lilly, Tea, Sugar, Reſin, Gum, &c. the characters, preparations, and various uſes of all which are given under their reſpective heads, as has been already mentioned in ſpeaking of Pharmacy.

(44, 45, 46) AGRICULTURE, including GARDENING and HUSBANDRY, furniſhes a great many uſeful articles; as Soil, Manure, Tillage, Fallowing, Plough, Drain, Sowing, Marle, Chalk, Clay, Loam, Sand, Incloſure, Hedge, Ditch, Grain, Granary, Wheat, Barley, Planting, Prunning, Grafting, Inoculating, Watering, Hot-Bed, Nurſery, Green-Houſe, Walk, Terrace, Gravel, Border, Wilderneſs, Orchard, Kitchen-garden, Amphitheatre, Wall, Eſpalier, Arbour, Alley, Canal, &c.

(47) MINERALOGY treats of all kinds of Foſſils, whether Stones, Earths, or Metals: hence the articles Mine, Ore, Gold, Silver, Iron, Copper, Tin, Lead, Quickſilver, Fluxes, Aſſaying, Dreſſing, Refining, &c. alſo Salt, Sulphur, Bitumen, Amber, Arſenic, Antimony, Cinnabar, Vitriol, Biſmuth, Calamine, Braſs,

Braſs, Cobalt, Smalt, Zinc, Nitre, Alum, Armoniac, Precious Stones, Cryſtals, Flint, Marble, Lime-ſtone, Slate, Glimmer, Aſbeſtus, Ochres, Marles, Chalk, Clay, Sand, Earth, Petrifactions, &c.

(48) HYDROLOGY is employed in explaining the Nature, Principles, and Uſes of all kinds of Waters, as Sea-water, Vitriolic Waters, Sulphureous-waters, Chalybeate-waters, Lime-water, &c. and hence Spring, Bath, Spaw, Briſtol, Pyrmont, Scarborough, Tunbridge, &c. Waters. As to the medicated Waters, they belong to Pharmacy.

(49) HYDROSTATICS conſtitute that part of Natural Hiſtory which explains the gravity and preſſure of water: hence the articles Fluids, Gravity, Preſſure, Specific-gravity, Denſity, Rarity, Æquilibrium, Araeometer, Hydroſtatical Balance, Diving-Bell, &c. Under which we have explained the uſe of theſe machines in Geometry, Commerce, Mechanics, &c. alſo for finding the ſpecific gravity of ſolid bodies; whereof we have given a table, as aſcertained by the beſt writers on theſe ſubjects.

(50) HYDRAULICS treat of the motion of water, and the conſtruction of all kinds of inſtruments and machines relating thereto. We have therefore conſidered this ſcience in five different lights, according to the cauſes which produce this motion. 1. That ariſing from the natural gravity and preſſure of the particles of water, which will be explained under the articles Spring, River, Fountain, Fluids, *Jet d'eau*, &c. 2. That ariſing from the preſſure of the air on the ſurface of the reſervoir, which will be explained under the heads Siphon, Pump, Archimedes's Screw, Preſſure, &c. 3. The motion of fluids produced by the force of condenſed air, conſidered under Water-engine. 4. That occaſioned by the force or preſſure of piſtons, explained under Forcing-pumps. 5. That owing to attraction; whence the articles Tide, Capillary Tubes, Hæmaſtatics, &c.

(51) NAVIGATION is the art of conducting a ſhip through the ocean, from one port to another; by which means a communication is opened between the moſt diſtant countries, and the delicacies, as well as the conveniencies of life, brought from the Eaſt and Weſt-Indies; the manufactures and ſuperfluities of one country are carried off, and in exchange are brought home the commodities wanted either for home-conſumption, for improving and inlarging their manufactures, or as commercial articles to be exported again. As therefore Navigation is the ſoul of ingenuity, the ſpring and ſupport of induſtry, and the only honourable means of enriching a nation, ſo uſeful a ſcience deſerves to be explained in the fulleſt and moſt diſtinct manner; which has been accordingly done under the articles Mercator's ſailing, Plain-ſailing, Current-ſailing, Middle-latitude-ſailing, Great Circle-ſailing, Compaſs, Chart, Needle, Variation, Log, Diſtance, Departure, Longitude, Latitude, Reckoning, Courſe, Traverſe, Obſervation, Quadrants, Fore-ſtaff, Back-ſtaff, Aſtrolable, Harbour, Port, Sounding, Mooring, Careening, Star-board, Lar-board, &c. together with the many articles hereafter mentioned under Ship-building.

(52) AEROLOGY treats of the nature and properties of Air, its Fluidity, Gravity, Elaſticity, Denſity, Rarefaction, Principles, Atmoſphere, Vapour, Exhalation, &c. whence Barometer, Thermometer, Hygrometer, &c.

(53) METEOROLOGY treats of the various phænomena obſervable in the atmoſphere, as Fog, Cloud, Rain, Snow, Hail, Dew, Rainbow, Water-ſpout, Halo,

Halo, Mock-ſuns, Thunder, Lightening, Aurora Borealis, Fiery Meteors, Caſtor and Pollux, Will-with-the-wiſp, &c.

(54) PNEUMATICS are chiefly employed in explaining the force and ſpring of the Air, the cauſe of Winds, Trade-winds, Monſoons, Hurricanes, &c. alſo the conſtruction of Air-pumps, Air-guns, Diving-Bells, Water-bellows, Æolipile, Windmills, Rigging and Sails of Ships, &c. together with the doctrine of Sound, Echoes, &c.

(55) OPTICS, including Catoptrics and Dioptrics, may be conſidered as theoretical or practical. In the firſt of theſe views we have explained the nature and propagation of Light, the cauſe and Laws of Reflection and Refraction, the different Refrangibility of the rays of Light, the ſtructure of the Eye and the nature of Viſion, the appearance of objects through mediums of different forms, and the cauſes of the variety of colours obſervable in bodies, as alſo of opacity and tranſparency. With regard to the practical part, we have given the method of grinding Glaſſes, Mirrors, Lenſes, &c. and conſtructing the moſt remarkable Optical inſtruments, as Teleſcope, Microſcope, Camera Obſcura, Magic Lanthorn, Polemoſcope, Polyhedron, Scioptic Ball and Socket, Helioſtata, Spectacles, Spying-Glaſſes, &c.

(56, 57) PERSPECTIVE, DRAWING, and PAINTING, are ſiſter arts, which by means of lines, ſhade, and colours, exhibit on a plane the likeneſs of natural objects, as they appear to the eye at any height or diſtance, or in any attitude or other circumſtances. Some of the articles, treated of under theſe heads, are Scenography, Orthography, Ichnography, Stereography, Anamorphoſis, Reduction, Plane, Deſigning, Engraving, Etching, Draught, Deſign, Pentagraph, Claro-Obſcuro, Attitude, Action, Expreſſion, Group, Contraſt, Limning, Miniature, Freſco, Japanning, Enamelling, Dialling, Drapery, Portrait, Mezzotinto, Colours, Crayon, Proportion, Prototype, &c.

(58) The artificial objects of knowledge are here claſſed, according to the principal purpoſes they are intended to ſerve; ſome being employed about Diet, others about Dreſs and Equipage, and others about Building and Furniture: ſome again are ſubſervient to Literature, and others employed about Tools, Inſtruments, and Machines of all kinds. We ſhall now take a view of the ſubdiviſions of this laſt branch of particular knowledge: And firſt of the Arts reſpecting

(59) DIET, which affords employments for various artiſts and tradeſmen, as Bakers, Brewers, Vintners, Cooks, Butchers, Poulterers, Fiſhmongers, &c. and hence the articles Baking, Bread, Biſket, Flour, Dough, Oven, Brewing, Ale, Beer, Wine, Cyder, Perry, Mead, Punch, Diſtilling, Fermenting, Clarifying, Bottling, Fleſh, Fiſh, Beef, Mutton, Poultry, Wild Fowl, Veniſon, Pork, Bacon, Ham, Cod, Herring, Salmon, Anchovy, Apple, Pear, Peach, Nectarine, Currants, Cherries, Pine-apple, Orange, Melon, &c. alſo Broth, Soup, Jelly, Pudding, Pye, Cuſtard, Sauce, Deſert, Tea, Coffee, Chocolate, Sugar, Spices, Milk, Cream, Butter, Whey, Cheeſe, Marmalade, Burgoo, Ragoo, Fricaſſee, and a multitude of other ſimilar articles.

(60) DRESS and EQUIPAGE give riſe to ſtill more numerous trades, the principal of which are mentioned under this branch in our general ſcheme of Knowledge. Hence the articles Cloth, Linen, Silks, Weaving, Fulling, Dying, Bleaching, Printing, Stuffs, Camblet, Brocade, Sattin, Cambric, Lawn, Muſlin, Gown, Hat, Stocking, Lace, Fur, Gloves, Shoes, Boots, Saddles, Chariot, Coach, Chair, &c.

(61)

(61) ARCHITECTURE, or the art of Building, includes a multitude of ſubordinate arts, as Maſonry, Carpentry, and thoſe of Bricklayers, Tylers, Slaters, Glaziers, Smiths, Plaſterers, &c. As to Architecture, properly ſo called, it conſiders the Solidity, Conveniency, Beauty, and Proportion of all manner of Buildings, as Church, Palace, &c. The terms, as found in Vitruvius, Palladio, Daviler, &c. are explained. The different orders, as Doric, Ionic, Corinthian, Tuſcan, Compoſite, &c. are not only deſcribed, but illuſtrated by Copper-plates. Hence a variety of uſeful articles, as Building, Foundation, Wall, Window, Door, Gate, Porch, Column, Pedeſtal, Baſe, Shaft, Entablature, Capital, Corniche, Freeze, Volute, Module, Modillion, Aſtragal, Tore, Chimney, Ceiling, Roof, Floor, Wainſcot, Stair, Hall, Apartment, Chamber, Cellar, Kitchen, Barn, Stable, &c.

(62) FORTIFICATION, or MILITARY ARCHITECTURE, comprehends all manner of Buildings and other works erected for the ſecurity and defence of a City, Town, or other places of ſtrength. Hence the articles Fortreſs, or fortified Town, Fort, Caſtle, Citadel, Baſtion, Curtin, Rampart, Ditch, or Moat, Counterſcarp, Covered-way, Glacis, Crown-work, Half-moon, Redoubt, Platform, Battery, Mine, Trench, Parallel, Circumvallation, Contravallation, &c. all which are in the order of the alphabet, as are the ſyſtems of Coehorn, Vauban, Scheiſter, &c. under Fortification.

(63) SHIP-BUILDING, or NAVAL ARCHITECTURE, treats of the Conſtruction, Rigging, and different parts of Ships of War and Burden, Sloops, Buſſes, Galleys, Barges, Boats, &c. Hence the articles Hull, Keel, Stern, Prow, Deck, Quarter-deck, Fore-caſtle, Cabin, Maſt, Bowſprit, Cordage, Cable, Anchor, Capſtan, Pump, Yards, Sails, Tackle, Helm, Steerage, &c.

(64, 65, 66) The arts relating to Furniture, Literature, Tools, Inſtruments, and Machines, afford employment to a multitude of workmen, ſome of whom are mentioned under theſe heads in our general ſcheme, where we are likewiſe pretty full in regard to the works produced by them; all which the reader will find deſcribed in their places, and moſt of the Tools, Inſtruments, and Machines, illuſtrated with copper-plates.

Thus we have taken a general ſurvey of the Arts and Sciences, and pointed out ſome of the principal ſubjects treated of in this Dictionary; concerning the Utility of which, no reaſonable perſon can entertain any doubt: — not the Prince, as having fleets to be equipped, military ſtores to be provided, public buildings to be erected, and matters of government to be tranſacted; — not the Nobleman or Gentleman, who have eſtates to be improved, gardens to be laid out, mines to be wrought, and other works to be executed; — not the Divine or Philoſopher, who will here find every branch of Literature treated in a truly ſcientifical and conſiſtent manner; — not the Merchant or Trader, who without a perfect knowledge of the commodities they deal in, the duties to be paid, the bounties and drawbacks to be received, and other commercial affairs, are liable to be greatly impoſed on; — and, laſtly, not the Farmer or Mechanic, who will here find an accurate deſcription of the Tools and Operations of their reſpective arts, with many uſeful hints towards improving them.

ARBOR SCIENTIAE EX C

OR,

A DISTRIBUTION O

ACCORDING TO I

- GENERAL, known by the names of {METAPHYSICS (1), ONTOLOGY, or FIRST PHILOSOPHY,} which treats of Beings in general, considered with respect to their
  - Essences, which
  - Affections, Attributes, or Predicaments.

or

- PARTICULAR, *viz.*
  - DIVINE, which is either
    - Speculative, treating of the {Being, Attributes, Providence, Worship, &c.} of God, as deduced from
    - or
    - Practical, comprehending the {Creeds, Ceremonies, Fasts, Festivals, Sects, &c.} to be found amon
  - HUMAN, respecting Man, considered
    - as an Individual, made up of
      - Soul, or Mind, the Faculties whereof are
        - Understanding; whence {Apprehens, Judgment, Reasoning, Demonstrat
        - Will, respecting {Good, Evil;}
        - Memory, as aided by {Sym, Lett
        - Imagination, as employed about {Speech, Verse, Sounds, Arts;}
      - Body, considered with respect to its {Const, Healt, Beaut, Vigou
    - in General, his Rank and Condition, the Union of Soul and Bod
    - as a Member of Society; whence
      - General ETHICS (35), or the duties
      - Law {of Nations, or the duties which; of particular States, *viz.* {Mu, Civ, Ca}}
      - GOVERNMENT (37), whether lodged in the hands of {th, th, a, a}
      - COMMERCE (38); whence Compar
  - NATURAL, which treats of the
    - Universe; whence Cosmography, subdivided into the {Ptolema, Coperni, Tychon}
    - Earth; whence
      - GEOGRAPHY (40), subdivided into {Natura, Politic, Eccles}
      - NATURAL HISTORY (41) describing its natural Productions, as
        - Animals; whe
        - Vegetables; wh
        - Minerals; wh
        - Fluids, as {

OBJECTIS DESUMPTA,

OR,

OF KNOWLEDGE

ITS OBJECTS.

ces, which are either { Spiritual, / or / Corporeal; } whence { Pneumatology (2). / Physics (3) { Mathematics (4) { Arithmetic (5). / Algebra (6). / Geometry (7) { Trigonometry (8). / Spherics (9). / Conics (10). } } / Physiology (11). { Dynamics (12). / Mechanics (13). } } }

tions, / butes, or / caments. } whence { Causalty, / Contingency, / Necessity, / Duration, whence Chronology (14). / Relation, &c.. }

l, as de- { Reason, / Revelation; } whence { Natural / Supernatural } Theology (15).

found among { Christians, / Jews, / Mahometans, / Pagans; } whence { True / False } Religions (16).

oul and Body, &c. the Science whereof may be termed Anthropology (17).

{ Apprehension, / Judgment, / Reasoning, / Demonstration; } comprehending the Doctrine of { Ideas. / Propositions. / Syllogisms. / Method, whether { Analytical, / Synthetical; } whence Logics (18). }

{ Good, / Evil; } whence arise { Love, { Desire, / Hope, / Joy, } / Hatred, { Fear, / Aversion, / Anger; } } whence Georgica Animæ, or personal Ethios (19).

led by { Symbols; whence { Hieroglyphics (20). / Heraldry (21). } / Letters; whence { Grammar (22), comprehending { Orthography. / Etymology. / Syntax. / Prosody. } / History (23). } }

{ Speech, / Verse, / Sounds, / Arts; } whence { Rhetoric (24). / Poetry (25), subdivided into { Epic. / Dramatic; whence { Tragedy. / Comedy. / Opera. / Pastoral. } / Allegorical. } / Music (26). / Painting, Sculpture, and the whole body of Arts (27). }

to its { Constituent Parts, / Health, / Beauty, / Vigour; } whence { Anatomy (28), / Medicine (29) subservient to which are { Pharmacy (30). / Chemistry (31). / Surgery (32). } / Cosmetics (33), / Gymnastics (34), comprehending { Fencing, / Dancing, / Boxing, &c. } }

or the duties which men owe to each other, abstracting from positive institutions.

duties which independent and free states owe to each other.

s, *viz.* { Municipal, subdivided into { Common, or Customary / Statute } Law (36). / Civil, common to all civilized States. / Canon, respecting the clergy and ecclesiastical Polity. }

whether of { the People, / the Nobility, / a few Persons, / a single Person; } whence { Democracy. / Aristocracy. / Olygarchy, and hence { Duumvirate. / Triumvirate. } / Monarchy. }

hence Company, Corporation, Exchange, Duty, Bounty, Drawback, Freight, Charter-party, &c.

the { Ptolemaic / Copernican / Tychonic } Systems of Astronomy (39).

into { Natural, / Political, / Ecclesiastical, } describing its { Figure and Natural Divisions, as Continent, Island, Ocean, Lake, &c. / Political Divisions, as Empire, Kingdom, Province, County, &c. / Ecclesiastical Divisions, into Archbishoprics, Bishoprics, Parishes, &c. }

nimals; whence Zoology (42), or the Science of { Quadrupeds; and hence Horsemanship, Hunting, Farriery, &c. / Birds, called Ornithology; and hence Falconry, Fowling, &c. / Amphibious Animals, as Serpents, Lizards, Frogs, &c. / Fishes, termed Ichthyology; and hence Fishing, &c. / Insects, both winged and naked, as Flies, Worms, &c. / Animalcules, or Animals visible only by the help of Microscopes. }

egetables; whence { Botany (43), containing the classes and characters / Agriculture (44), / Gardening (45), / Husbandry (46), } describing the Cultivation of Plants.

Minerals; whence Mineralogy (47), which treats of { simple / compound / aggregate } Fossils, as { vitrifiable, calcarious, and incombustible Stones. / Ores of Salts, Sulphurs, and Metals. / Sparry Concretions, Petrifactions, and Earths. }

Fluids, as { Water, / Air, } { Hydrology (48), Hydrostatics (49), Hydraulics (50), Navigation (51). / Aerology, (52), Meteorology (53), Pneumatics (54). }

- ARTIFICIAL, (58) whether relating to
  - NATURAL HISTORY (41) describing its natural Productions, as
    - Vegetables; whence
    - Minerals; whence
    - Fluids, as { Wa, Air, Fire
  - DIET and DOMESTIC OECONOMY (59); whence the various Operations of { Baking, Cooking, Brewery, Distillery, Pickling, Curing, &c. } tog
  - DRESS and EQUIPAGE (60), whether of { Skins, Hair, Wool, Silk, Flax, Cotton and Hemp, Metals, Precious Stones; } whence {
  - BUILDING, subdivided into
    - ARCHITECTURE (61); whence
    - FORTIFICATION (62); whence
    - SHIP-BUILDING (63); whence
  - FURNITURE (64); whence { Painters, Upholsterers, Joiners, Tables, Chairs, Chests of Draw
  - LITERATURE (65); whence { Paper-makers, Letter-founders, Paper, Parchment, Type, Cop
  - TOOLS, INSTRUMENTS, MACHINES, &c. (66) whence
    - Plough, Scythe, Sickle, Pruning-hoo
    - Card, Wheel, Loom, Fulling-mill,
    - Saw, Ax, Plane, Chissel, Gouge, H
    - Rulers, Compasses, Quadrants, The
    - Watch, Clock, Dial, Barometer, Th
    - Gun, Pistol, Cannon, Mortar, Coeho

BRITISH MUSEUM

ables; whence { AGRICULTURE (44), GARDENING (45), HUSBANDRY (46), } describing the Cultivation of Plants.

rals; whence MINERALOGY (47), which treats of { simple, compound, aggregate } Foſſils, as { vitrifiable, calcarious, and incombuſtible Stones. Ores of Salts, Sulphurs, and Metals. ſparry Concretions, Petrifactions, and Earths.

ds, as { Water, Air, Fire, and Light; } whence { HYDROLOGY (48), HYDROSTATICS (49), HYDRAULICS (50), NAVIGATION (51). AEROLOGY, (52), METEOROLOGY (53), PNEUMATICS (54). OPTICS (55), PERSPECTIVE (56), PAINTING (57).

g,
ng,
ry,
ery,
ng,
g, &c. } together with the many Utenſils and Implements belonging to each of them.

} whence { Tanners, Curriers, Shoemakers, Glovers, Sadlers, Coach-makers, &c.
Hatters, Hair-ſpinſters, Bruſh-makers, Peruke-makers, &c.
Clothiers, Weavers, Fullers, Dyers, Woollen-drapers, Taylors, Hoſiers, &c.
Throwſters, Silk-weavers, Mercers, Mantua-makers, &c.
Bleachers, Linen-drapers, Milliners, Thread-ſpinners, Lace-weavers, &c.
Muſlin, Callico, Manchester-velvet, Fuſtian, Canvas, &c.
Refiners, Gold-beaters, Gilders, Embroiderers, Lacemen, Sword-cutlers, Buckle and Button-founders, &c.
Lapidaries, Diamond-cutters, Jewellers; Ring, Ear-ring, Bracelet, Brilliant, &c.

51); whence { Maſons, Bricklayers, Tylers, Slaters, Carpenters, Smiths, Glaziers, &c.
Tuſcan, Doric, Ionic, Corinthian, Compoſite, &c. Orders; alſo Column, Capital, &c.
Church, Palace, Houſe, Hall, Library, Bridge, Door, Window, Chimney, &c.

52); whence Caſtle, Fort, Baſtion, Rampart, Moat, Crown-work, Curtin, Horn-work, Half-moon, &c.

53); whence { Ship-carpenters, Anchor-ſmiths, Cordage-makers, Sail-makers, Sailors, &c.
Ships of war and burden, Galley, Sloop, Yacht, Barge, Boat, Sculler, &c.
Hull, Deck, Maſt, Yard, Bowſprit, Stern, Forecaſtle, Keel, Cabin, &c.

ers, Joiners, Turners, Bedſtead-makers, Cabinet-makers, Black-ſmiths, Silver-ſmiths, Carpet-weavers, &c.
heſts of Drawers, Beds, Blankets, Buroes, Beaufets, China, Looking glaſſes, Pictures, Toilets, Plate, Stoves, &c.

ter-founders, Wood-cutters, Printers, Engravers, Bookbinders, Bookſellers, Mathematical-inſtrument makers, &c.
Type, Copper-plate, Preſs, Rolling-preſs, Ink, Book, Folio, Quarto, Octavo, Deſk, Form, Book-caſe, &c.

Pruning-hook, Cart, Waggon, Water-mill, Wind-mill, Water-works, Wine-preſs, Powder-mill, Steam-engine, &c.
ulling-mill, Vat, Calender, Reel, Silk-engine, Diamond-cutters-wheel, Machines for wire-drawing, &c.
l, Gouge, Hammer, Mallet, Sawing-mill, Plummet, Bevel, Crane, Pile-engine, Forge, Bellows, Anvil, &c.
adrants, Theodolite, Circumferentor, Orrery, Globes, Scale, Balances, Screws, Pullies, Axis and Wheel, Wedge, &c.
rometer, Thermometer, Camera-obſcura, Clepſydra, Diving-bell, Teleſcope, Pumps, Air-pumps, Micrometer, Microſcope, &c.
Mortar, Coehorn, Ball, Bomb, Bayonet, Sword, Grenado, Drum, Trumpet, Chain-ſhot, Fire-works, Battering-ram, Ballista, &c.

[To be placed after the Introduction.]

A NEW AND COMPLETE DICTIONARY OF ARTS and SCIENCES.

A A

A, The first letter of the alphabet, and one of the five vowels, is pronounced variously; sometimes open, as in the words *talk*, *war*; and at others close, as in *take*, *wake*.

A is also used, on many occasions, as a character, mark, or abbreviation. Thus, in the calendar, it is the first of the dominical letters: among logicians, it denotes an universal affirmative proposition: as a numeral, A signified 1 among the Greeks; but among the Romans, it denoted 500, and with a dash over it, thus $\bar{A}$, 5000. The Romans also used it on public occasions for *antiquare*, to antiquate or reject a proposed law; as did the judges of the same people for *absolvo*, I absolve or acquit; whence it had the name of *litera salutaris*. A is frequently also met with, denoting *Aulus*, *Augustus*, *Ager*, *Aiunt*, &c. A. A. stands for *Augusti*; A. A. A. for *aurum*, *argentum*, *aes*; and, among chemists, for *Amalgama*. A. M. is used for *anno mundi*, or *artium magister*. A. A. U. C. for *anno ab urbe condita*; A. B. for *alia bona*; A. C. for *acta causa*, or *alius civis*; and A. D. for *anno domini*. On ancient medals, A stands for *Argos*, and sometimes for *Athens*; but on coins of modern date, for *Paris*. A, $\bar{a}$ or $\bar{aa}$, among physicians, denote *ana*, or an equal weight, or quantity, of several ingredients. The letter A is also used by merchants, to signify accepted; among whom it is likewise usual to mark their sets of books with the letters A, B, C, &c. instead of the numbers 1, 2, 3, &c.

A, or AN, is also one of the english articles. See ARTICLE.

AA, in geography, the name of several

A B A

rivers, in different parts of the world. 1. Of one in the country of Sologne, in France. 2. Of one in french Flanders. 3. Of three in Switzerland. 4. Of five in the Low Countries. 5. Of five in Westphalia. 6. And, lastly, of one in Livonia.

AACH, in geography, the name of a town and river of Swabia. See the article SWABIA.

AADE, or AADA, the name of two rivers, one in the country of the Grisons in Switzerland, and the other in dutch Brabant.

AAR, the name of two rivers, one in Switzerland, and the other in Westphalia.

AATTER, a province of Arabia Felix, situated on the Red-Sea. N. B. There are several other places, sometimes spelled with AA, but more usually with one A: these will be inserted in the alphabetical order, according to the last orthography.

AB, in the hebrew chronology, the eleventh month of the civil, and the fifth of the ecclesiastical, year: it answered to the moon of our July, and contained thirty days.

ABACATUAIA, in ichthyology, an american fish of the acanthopterygious, or prickly-finned, kind. It is a species of zeus, according to Artedi, and greatly resembles the common plaise, both in size and figure. It has five fins, one on the back, and another on the belly, both running to the tail: there are other two at the gills; and the tail, which is considerably forked, makes the fifth. See plate I. fig. 1.

ABACOT, the name of the ant ent coronet, or cap of state, worn by the english kings, the upper part of which was made up in form of a double crown.

ABACTUS, among antient phyſicians, a term uſed for a miſcarriage effected by art.

ABACUS, in architecture, the uppermoſt member of the capital of a column. See the article CAPITAL.

Vitruvius tells us, that Calimachus, a ſtatuary of Athens, invented this ornament from the following circumſtance. An Athenian old woman happening to place a baſket covered with a ſquare tile over the root of an acanthus, which grew on the grave of a young corinthian lady, the plant, ſhooting up the following ſpring, encompaſſed the baſket all around, till meeting with the tile, it curled back in a kind of ſcrolls. The ſculptor, paſſing by and obſerving it, executed a capital on this plan, repreſenting the tile by the abacus; the leaves of the acanthus by the volutes or ſcrolls, and the baſket by the body of the capital.

In the tuſcan, doric, and ionic orders, the abacus is flat and ſquare; but in the richer orders, its four ſides, or faces, are arched inwards, with ſome ornament, as a roſe or other flower, in the middle of each arch, and its four corners cut off. See plate I. fig. 2.

Scamozzi alſo uſes abacus for a convave moulding in the capital of the tuſcan pedeſtal.

Abacus, or *Abaciſcus*, in the antient architecture, likewiſe denoted certain compartments in moſaic pavements, and the like.

ABACUS, among antient mathematicians, was a table ſtrewed over with duſt, or ſand, on which they drew their figuers or ſchemes.

ABACUS, in arithmetic, an inſtrument for facilitating operations by means of counters. Its form is various; but that chiefly uſed in Europe, is made by drawing parallel lines, diſtant from each other at leaſt twice the diameter of a counter; which placed on the lowermoſt line, ſignifies 1; on the ſecond, 10; on the third, 100; on the fourth, 1000; and ſo on. Again, a counter, placed in the ſpaces between the lines, ſignifies only the half of what it would do on the next ſuperior line. According to this notation, the ſame number, 1754 for example, may be repreſented by different diſpoſitions of counters. See A and B plate 1. fig. 3.

Abacus pythagoricus, a multiplication-table, or a table of numbers ready caſt up, to facilitate operations in arithmetic.

Abacus logiſticus, is alſo a kind of multiplication-table, in form of a right-angled triangle.

Abacus harmonicus, among muſicians, denotes the arrangement of the keys of a muſical inſtrument.

ABAFT, in the ſea-language, a term applied to any thing ſituated towards the ſtern of a veſſel: thus, a thing is ſaid to be abaft the fore maſt, or main-maſt, when placed between the fore-maſt, or main-maſt, and the ſtern.

ABALIENATION, in the roman law, a ſpecies of alienation. See the article ALIENATION.

ABAPTISTON, or ANABAPTISTON, among antient phyſicians, names given to the inſtrument now called a trepan. See the article TREPAN.

ABARTICULATION, in anatomy, the ſame with diarthroſis. See the article DIARTHROSIS.

ABASED, *abaiſſé*, in heraldry, is ſaid of the wings of eagles, &c. when the tip looks downwards to the point of the ſhield, or when the wings are ſhut; the natural way of bearing them being ſpread.

A chevron, pale, bend, &c. are alſo ſaid to be abaſed, when their points terminate in, or below the center of the ſhield. Laſtly, an abaſed ordinary, is one placed below its due ſituation.

ABASING, in the ſea-language, the ſame with ſtriking. See STRIKE.

ABASSI, or ABASSIS, a ſilver coin, current in Perſia, and ſomewhat leſs than the engliſh ſhilling.

ABATE, in the manege. A horſe is ſaid to abate, or take down his curvets, when he puts both his hinder-legs to the ground at once, and obſerves the ſame exactneſs in all the times. See the article CURVET.

ABATELEMENT, in commerce, a term uſed for a prohibition of trade to all french merchants in the ports of the Levant, who will not ſtand to their bargains, or refuſe to pay their debts.

The abatelement is a ſentence of the french conſul, and muſt be taken off before they can ſue any perſon for the payment of their debts.

ABATEMENT, in a general ſenſe, ſignifies the leſſening or diminiſhing ſomething.

ABATEMENT, in heraldry, ſomething added to a coat of arms, in order to leſſen its true dignity, and point out ſome imperfection or ſtain in the character of the perſon who bears it. Abatements are either made by reverſion or diminution; the whole eſcutcheon being turned upſide down, or another inverted one added, in the former caſe; and as to diminutions, they are either a delf, a point, a point dexter, a point champain, a plain point,

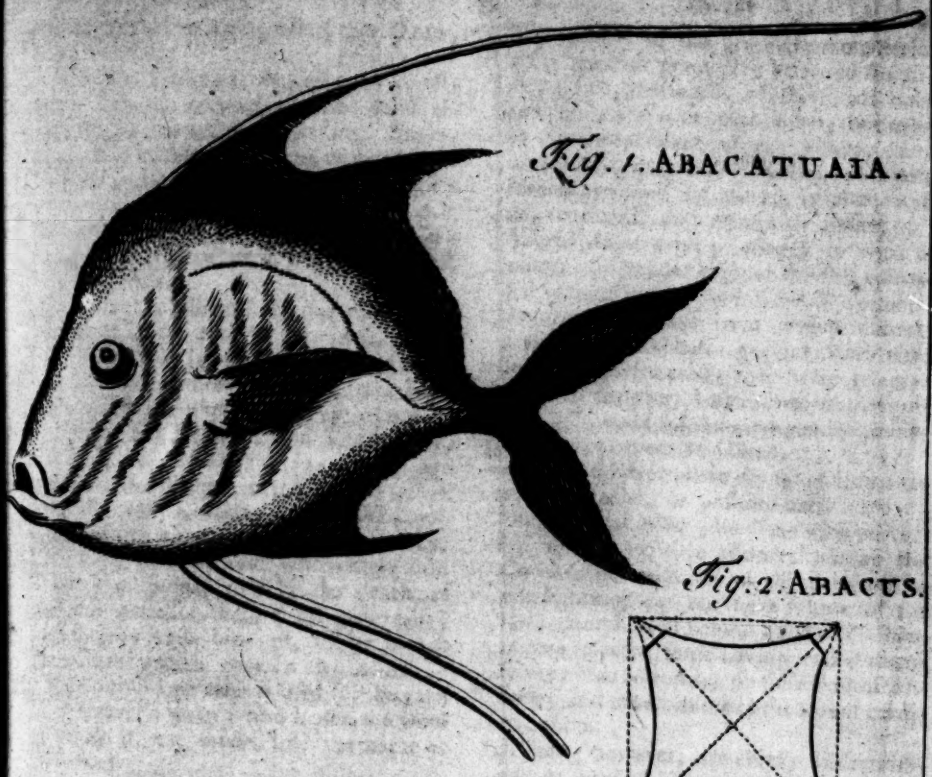


Fig. 1. ABACATUAIA.

Fig. 2. ABACUS.

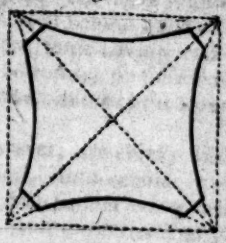


Fig. 3. ABACUS, or *COUNTING-BOARD.*

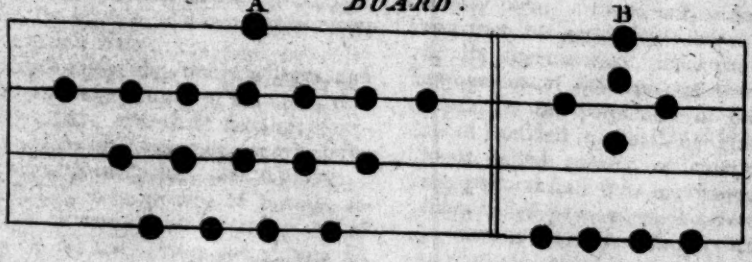
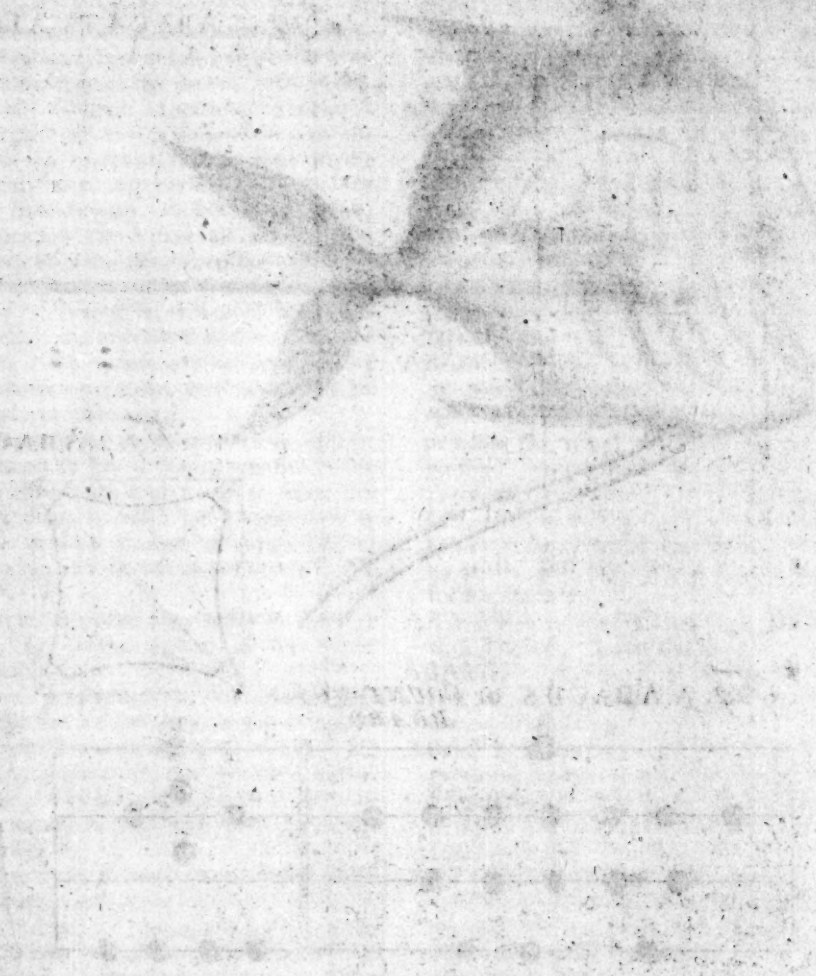


Fig. 4. ABIES, the *FIR-TREE.*



T. Jefferys sculp.



BRITISH MUSEUM

a goar ſiniſter, or two guſſets. See DELF, POINT, &c.

ABATEMENT, in law, ſignifies the rejecting a ſuit, on account of ſome fault either in the matter, or proceeding. Hence, Plea in abatement is ſome exception alledged, and proved, againſt the plaintiff's writ, declaration, &c. and praying that the plaint may abate or ceaſe; which being granted, all writs in the proceſs muſt begin *de novo*.

Abatement is alſo an irregular entry upon houſes or lands, and in this ſenſe, is ſynonymous with intruſion. See ABATOR.

ABATEMENT, among traders, the ſame with what is otherwiſe called rebate or diſcount. See REBATE and DISCOUNT.

ABATIS, or ABBATIS, in middle age writers, an officer in the ſtables of princes; ſo called, according to Ducange, from batum, an antient meaſure of corn.

ABATOR, in law, one who enters into a houſe or lands, void by the death of the laſt poſſeſſor, before the true heir; and thereby keeps him out, till he brings the writ *intruſione*. See INTRUSIONE.

ABB, in our old writers, is uſed for the yarn of a weaver's warp; and hence the wool of which it was made, had the name of abb-wool.

ABBA, a ſyriac term, literally ſignifying father, and uſed as a title of honour, particularly to a biſhop or abbot.

ABBESS, the ſuperior of a convent of nuns. See the article NUN.

The abbeſs enjoys the ſame privileges, and has the ſame authority over her nuns, that the abbots have over their monks; ſpiritual functions only excepted, of which the ſex renders her incapable. See ABBOT.

ABBEVILLE, a large city of France, ſituated in Picardy, ninety miles N. of Paris; its N. Lat. being 50° 7′. and E. longitude 2°.

ABBEY, or ABBY, the name of ſuch religious houſes as are governed by a ſuperior, under the title of abbot or abbeſs.

Abbeys differ in nothing from priories, except that the latter are governed by priors, inſtead of abbots.

The abbeys of England, at their diſſolution under K. Henry VIII. became layfees: no leſs than 190 were then diſſolved of between 200 *l.* and 35,000 *l.* yearly revenue, which at a medium amounted to 2,853,000 *l. per annum*; an immenſe ſum in thoſe days.

ABBOT, or ABBAT, the ſuperior, or governor of a monaſtery of monks, erected into an abbey or prelacy. See MONK and MONASTERY.

The abbots of the primitive monaſteries were men of great plainneſs and ſimplicity; but afterwards affecting not only preheminence over each other, but even to be independent of the biſhop, there aroſe new ſpecies and diſtinctions of abbots into mitred and not mitred, croziered and not croziered, and œcumenical ones.

Mitred *Abbots* were privileged to wear a mitre, and beſides enjoyed the full epiſcopal juriſdiction of their ſeveral precincts. Among us, theſe were called abbots-ſovereign, or abbots-general, and were lords of parliament: they were twenty-ſeven in number, beſides two mitred priors. The not mitred ones continued ſubject to their dioceſan biſhop.

Croziered *Abbots* were thoſe entituled to carry a crozier, or paſtoral ſtaff.

Oecumenical *Abbots*, the ſame with univerſal abbots, a title aſſumed among the Greeks, in imitation of the patriarch of Conſtantinople: nor have thoſe of the latin church been behind hand with them in this reſpect; ſome having called themſelves *abbas abbatum*, or the abbot of abbots; and others aſſumed the title of cardinal-abbot.

Abbots, however, are chiefly diſtinguiſhed, at preſent, into regular and commendatory; the former being real monks or religious, and the latter only ſeculars or lay-men. Theſe laſt, notwithſtanding that the term *commendam* ſeems to ſignify the contrary, have the perpetual enjoyment of the fruits of their abbeys.

Antiently the ceremony of creating an abbot conſiſted in cloathing him with the habit called *caculla*, or cowl: putting the paſtoral ſtaff into his hand, and the ſhoes called *pedales*, on his feet; but at preſent, it is only a ſimple benediction, improperly called, by ſome, conſecration.

ABBOT is alſo a title given to others beſide the ſuperiors of monaſteries: thus biſhops, whoſe ſees were formerly abbeys, are called abbots; as are the ſuperiors of ſome congregations of regular canons, particularly that of St. Geneviéve at Paris: and among the Genoeſe, the chief magiſtrate of their republic formerly bore the title of abbot of the people. It was likewiſe uſual, about the time of Charlemaign, for ſeveral lords to aſſume the title of *count-abbots*, *abba-comites*; and that for no other reaſon, but becauſe the ſuper-intendency of certain abbeys was committed to them.

ABBREVIATION, the ſame with abbreviature. See ABBREVIATURE.

ABBREVIATOR, in a general ſenſe, one

who abridges, or reduces a long writing into narrow bounds.

Abbreviators, in the chancery of Rome, are officers whose business, according to Champini, is to draw up the pope's briefs, and reduce the petitions granted by the pontiff into proper form. The abbreviators constitute a college of seventy-two persons, divided into two parks, or ranks; the one called *abbreviatores de parco majore*, who are twelve in number, and all prelates; the other, *abbreviatores de parco minore*, called also *examinatores*, who may be all lay-men.

ABBREVIATURE, or ABBREVIATION, properly signifies the substitution of a syllable or letter for a whole word: thus M. stands for *manipulus*, a handful; and Cong. for *congius*, a gallon.

Abbreviature, in a less proper sense, is used for any mark or character. See CHARACTER.

ABBREUVOIR, in masonry, certain indentures made with a hammer, in the joints and beds of stones, in order that the mortar being received into these, may bind them the firmer together.

ABCEDARY, ABCEDARIAN, or ABECEDARIAN, an epithet given to compositions, the parts of which are disposed in the order of the letters of the alphabet: thus, we say abcedarian psalms, lamentations, hymns, *&c.*

ABDALS, in the asiatic customs, a kind of furious enthusiasts, whose madness makes them frequently run about the streets, and kill all they meet of a different religion from what they profess: this our sailors call *running a muk*.

ABDEST, among mahometans, a kind of washing, or lotion, practised both by Turks and Persians, before prayers, entering the mosque, or reading the alcoran.

ABDIARA, in geography, a kingdom of Asia, dependent on that of Pegu. See the article PEGU.

ABDICARIAN *propesition*, *abdicaria propositio*, in logic, the same with a negative one. See the article PROPOSITION.

ABDICATION, *abdicatio*, the act of a magistrate, who gives up or divests himself of an office. It differs from resignation, as this last is done in favour of some other person: whereas abdication is done without any such view. See RESIGNATION.

ABDICATION is also used, by civilians, for a father's discarding his son. This, called likewise *a familia alienatio*, was different from exheredation, or disinheriting, as being done in the father's life-time; whereas exheredation never took place till his death: so that an abdicated son was actually disinherited, but not *vice versa*.

This term, among the Romans, was also used for a citizen's renouncing his liberty, and voluntarily becoming a slave.

ABDOMEN, in anatomy, the lower part of the trunk of the body, reaching from the thorax to the bottom of the pelvis. See the article THORAX.

The abdomen is divided, by anatomists, into three anterior regions, *viz.* the epigastric, or upper one; the umbilical, or middle one; and the hypogastric, or lower one: there is also one posterior region, called *regio lumbaris*. See the article EPIGASTRIC, *&c.*

Each of these regions is likewise divided into three parts, a middle and two lateral ones: thus, in the epigastric region, besides the middle part, we have the right and left hypochondrium; in the umbilical region, the *umbilicus* or middle part, and its lateral parts, the *lumbi* or loins; and, lastly, in the hypogastric region, the middle part is called *pubes*, and its two lateral parts the *inguina* or groins. See HYPOCHONDRIA, *&c.*

Within the abdomen, besides the stomach and alimentary duct, there are contained the mesentery, mesocolon, omentum, liver, gall-bladder, spleen, pancreas, mesenteric glands, the lacteal vessels, receptaculum chyli, kidneys, renal glands, ureters, bladder, and the internal parts of generation in both sexes. See STOMACH, *&c.*

The abdomen forms a kind of oblong convexity, like an oval vault, separated from the cavity of the thorax by the diaphragm. It is lined, on the inside, with a strong but soft membrane, called the peritoneum; which surrounds, and contains all the viscera. On the outside, it is guarded by the muscles called obliqui ascendentes and descendentes: together with the rectus transversalis and pyramidalis. See the description of each under its proper article.

The cavity of the abdomen is of an irregularly oval figure, but still symmetrical. On the forside, it is uniformly arched or oval, and its greatest capacity is about the navel. On the upper side, it is bounded by a portion of a vault, very much inclined. On the back side, it is in a manner divided into two cavities, by the jutting out of the vertebræ of the loins. On the lower side, it contracts all the way to the edge of the pelvis, and from

from thence expands again a little, as far as the os coccygis, and the tubercles of the iſcium; terminating in the void ſpace between theſe three parts.

It is remarkable of the ſkin of the abdomen, that it may be naturally increaſed very much in breadth, without loſing any thing conſiderable of its thickneſs, as is the caſe in the natural ſtates of corpulency and pregnancy.

Diſeaſes of the ABDOMEN are chiefly inflammations, abſceſſes, indurations, inflations, ſpaſms, *&c.* See INFLAMMATION, *&c.*

Wounds of the ABDOMEN. Theſe either affect the common integuments and muſcles only, or they likewiſe penetrate into the abdomen. Now it is eaſy to examine whether this laſt be the caſe, by the eye, by a probe or finger, or by injecting warm water into the wound: if the water meets with no obſtruction, the wound certainly penetrates; but if it is thrown back, and the probe cannot enter, you may conclude the wound has not penetrated into the cavity of the abdomen.

Wounds which do not penetrate into the cavity are of two ſorts; for either the common integuments only are hurt, or the muſcles alſo of the abdomen are divided, as far as the peritoneum. Wounds of the firſt kind are eaſily cured, but thoſe of the latter claſs are extremely dangerous, becauſe the inteſtines are apt to fall through the wound. Hence the future becomes neceſſary to keep the gaping lips of the wound together; after which the wound is to be dreſſed with vulnerary balſams, and a ſticking plaſter: reſt and abſtinence muſt likewiſe be enjoined the patient, and his bowels kept open by an emollient clyſter.

If the wound be found to penetrate, the ſurgeon ought to examine carefully whether any of the inteſtines be hurt; which he may conclude is not the caſe, when there is no great degree of weakneſs, hæmorrhage, pain, fevers, *&c.*; if when the patient is laid on the wounded ſide, there is no diſcharge of chyle, gall, excrements, or urine, if milk be injected warm, and return without any alteration of its colour; if the inſtrument was not very ſharp; and, laſtly, if there is no vomiting nor diſcharge of blood by the mouth, ſtool, or urine, nor any ſwelling and hardneſs of the belly.

ABDUCENT, *abducens*, in anatomy, the ſame with abductor. See ABDUCTOR.

ABDUCTION, in logic, a form of reaſoning, called by the Greeks *apagoge*; wherein, from a certain or undeniable propoſition, we infer the truth of ſomething ſuppoſed to be contained in that propoſition: thus in this ſyllogiſm,

Whatever God has revealed is certainly true:

Now, God has revealed the myſteries of the incarnation and trinity:

Therefore, theſe myſteries are certainly true.

In arguments of this kind, it is always neceſſary to prove the minor propoſition to be contained in the major, or undeniable one, otherwiſe the reaſoning loſes all its force.

ABDUCTION, in ſurgery, a kind of fracture, wherein the bone being entirely broken near a joint, the two ſtumps recede conſiderably from each other. See FRACTURE.

ABDUCTOR, or ABDUCENT, in anatomy, a name given to ſeveral muſcles on account of their ſerving to withdraw, open, or pull back the parts to which they are fixed. Of this kind are the *abductor auricularis*, or of the little finger; the *abductor indicis*, or of the fore-finger; the *abductor labiorum*, called alſo *levator* and *elevator*; the *abductor minimi digiti pedis*, or of the little toe; the *abductor oculi*, or of the eye; the *abductor oſſis metacarpi digiti minimi*, or metacarpal abductor; the *abductor pollicis*, or of the thumb, called alſo *thenar*; the *abductor pollicis longus*, called alſo *extenſor primus pollicis*; and laſtly, the *abductor pollicis pedis*, or of the great toe. See FINGER, THUMB, TOE, *&c.*

ABECEDARIAN, the ſame with abcedary. See ABCEDARY.

ABEL-TREE, or ABELE-TREE, a name given to the white poplar with large leaves. See the article POPLAR.

ABELMOSCH, or ABELMUSCH, the name of the egyptian *ketmia*, with perfumed ſeeds, called by us *muſk-ſeed*. See the articles KETMIA and MUSK-SEED.

ABELOITES, or ABELONIANS, in church-hiſtory, a ſect of heretics, called alſo abelians, whoſe diſtinguiſhing doctrine was to marry, and yet live in profeſſed abſtinence; a tenet, which, according to ſome authors, they founded on that text, 1 Cor. vii. 29. *Let them that have wives be as though they had none.*

ABERBROTHOCK, one of the royal boroughs of Scotland, ſituated in the county of Angus, about forty miles N. of Edinburgh; its W. longitude being 2° 20'.

and

and N. latitude 56° 30′.

ABERCONWAY, a town in Wales. See CONWAY.

ABERDEEN, the name of two cities in Scotland, ſituated on the german ocean, in 1° 45′ W. longitude, and 57° 11′ or 13′ N. lat. and called the old and new towns; the former of which was a biſhop's ſee, ſtanding on the ſouthern banks of the river Don; and the latter, which is one of the royal boroughs, and a town of conſiderable trade, on the northern bank of the river Dee: ſo that, properly ſpeaking, the new town only ſhould be called Aberdeen, and the old town Aberdon; aber ſignifying the mouth or conflux of rivers. There is an univerſity in both towns; that in the old one being called the *King's-College*; and the other, in the new town, the *Marſhal's* or *Earl-Marſhal's college*.

ABEREMURDER, *aberemurdrum*, in our old law books, murder proved in a judiciary way. Aberemurder was a crime that could not be atoned for with money, as moſt others might.

ABERGAVENNY, a town of Monmouthſhire, ſituated fourteen miles weſt of Monmouth, in 3° 12′ W. longitude and 51° 50′. N. latitude.

ABERRATION, in aſtronomy, an apparent motion of the fixed ſtars, occaſioned by the progreſſive motion of light. See the article LIGHT.

ABERRATION, in optics, a deviation of the rays of light, when reflected, whereby they are prevented from meeting in the ſame point. Aberrations are of two kinds, one ariſing from the figure of the reflecting body, the other from the different refrangibility of the rays themſelves: this laſt is called the *newtonian aberration*, from the name of the diſcoverer.

ABERYSTWITH, a market town in Wales, ſituated in 4° 15′ W. longitude, and 52° 30′ N. latitude, about twenty-ſeven miles N. E. of Cardigan.

ABESTA, in perſian antiquity, one of the ſacred books of the magi, attributed to their founder Zoroaſter. It is a commentary on two others, called *zend* and *pazend*. See the article ZEND.

ABETTOR, or ABBETTOR, in law, the perſon who promotes or procures a crime to be committed: thus, an abettor of murder is one who commands or counſels another to commit it. An abettor, according as he is preſent or abſent at the time of committing the fact, is puniſhable as a principal or acceſſary. See the article ACCESSARY.

An abettor is the ſame with one who is deemed *art and part*, by the law of Scotland. See ART and PART.

ABEX, the name of a large tract of land lying along the weſtern coaſt of the Red-Sea: it is ſubject to the Turks.

ABEYANCE, ABEIANCE, or ABBAYANCE, in law, the expectancy of an eſtate or poſſeſſion: thus, when a parſon dies, the fee of the glebe belonging to his church is ſaid to be in abeyance during the time the parſonage is void. It is a fixt principle of law, that the fee-ſimple of all lands is in ſomebody, or elſe in abeyance.

ABIB, in the hebrew chronology, the firſt month of their eccleſiaſtical year. It was afterwards called niſan, and anſwered to our March.

ABIES, the FIR-TREE, in botany, a ſpecies of the pine-tree, the ſpecific characters of which are, that the leaves are ſingle, and not placed in pairs as in the pine. See plate I. fig. 4. and the article PINE.

The tops and leaves of the fir-tree, are recommended to be taken in diet drinks for the ſcurvy. Roſin, tar, common pitch, burgundy pitch, ſtraſburg turpentine, canada balſam, *&c.* are productions of fir; for the deſcription and uſes of all which, ſee ROSIN, TAR, *&c.*

ABIGEAT, *abigeatus*, in the civil law, the crime of ſtealing or driving off cattle in droves, otherwiſe called *abactus*.

It was more ſeverely puniſhed than ſimple theft, *viz.* by a condemnation to the mines, baniſhment, or even death itſelf.

ABIGEAT was alſo uſed among antient phyſicians, in the ſame ſenſe with abactus, for a miſcarriage or abortion effected by art. See ABORTION.

ABIGEUS, in the civil law, one who is guilty of the crime abigeat. See the article ABIGEAT.

ABILITY, in a law ſenſe, is the power of doing certain actions, principally in regard to the acquiſition or transferring of property. Every perſon is ſuppoſed to have this power, whom the law does not diſable. See the article NON-ABILITY.

ABINGTON, a town of Berkſhire, ſituated on the river Thames about fifty-five miles W. of London, and five miles ſouth of Oxford. It gives the title of earl

earl to the noble family of Bertie.

AB-INTESTATE, *ab inteſtato*, in the civil law. See INTESTATE.

ABISHERING, in our old law books, charters, &c. a liberty or freedom from all amerciaments: alſo a right to the forfeitures of others.

ABJURATION, in law, is uſed for renouncing, diſclaiming, and denying the pretender to have any manner of right to the throne of theſe kingdoms: and that upon oath, which is required to be taken upon divers pains and penalties by many ſtatutes, particularly 1 W. and M. 13 W. III. 1 Anne. 1 Geo. I.

ABJURATION, in our antient cuſtoms, an oath taken by a perſon guilty of felony, and who had fled to a place of ſanctuary, to leave the world for ever. This is much the ſame with what in Scotland is called *ſigning an act of baniſhment*.

ABJURATION *of hereſy*, the ſolemn recantation of ſome doctrine, as wicked and falſe.

ABLACTATION, *ablactatio*, the weaning a child from the breaſt. As nature has taken care to provide an aliment ſuitable to the ſtomachs of new-born infants, ſo it has pointed out directions when to change it for a diet that is more ſolid and difficult of digeſtion. See the article INFANT.

Exerciſe and motion are the grand promoters of digeſtion. Whilſt therefore an infant is incapable of ſufficient exerciſe and motion to digeſt ſolid food, a thin fluid is provided for his ſuſtenance, which is almoſt converted into nouriſhment before it is taken into his ſtomach; and leſt the nurſe ſhould give him improper aliment, providence ſeems to have ſecured his tender ſtomach, in ſome degree, from the miſchiefs of indigeſtion, by denying the infant the uſe of teeth for the firſt months. See the articles DIGESTION and MILK. Hence it will appear, that a child ought not to be weaned till nature points out the proper time, by giving him teeth, and making him capable of taking exerciſe ſufficient to comminute, and afterwards to digeſt, an aliment more ſolid and more difficult to diſſolve than the milk of its mother or nurſe. But becauſe an infant is furniſhed by degrees with the inſtruments of maſtication, and the power of uſing exerciſe, the tranſition from milk to ſolid food ſhould not be ſudden.

It is not poſſible to lay down rules for weaning of children adapted to every caſe that may occur; regard is to be had to the ſtrength and health of the mother or nurſe, as well as of the child. Upon the whole, the method which nature ſeems to point out ſhould be purſued, unleſs ſome circumſtances interfere, which make it impracticable.

ABLACTATION, among the antient gardeners, the ſame with what is now called *grafting by approach*. See the article GRAFTING.

ABLAI, a country of Great-Tartary, the inhabitants of which, called Buchars or Buchares, are ſubject to Ruſſia, but that only for protection. It lies eaſtward of the river Irtis, and extends five hundred leagues along the ſouthern frontiers of Siberia.

ABLAQUEATION, in the agriculture of the antients, an operation called *baring of trees* by our gardeners. See the article BARING.

ABLATIVE, *ablativus*, in latin grammar, the name of the ſixth caſe, which is peculiar to that language. See the article CASE.

The ablative is oppoſed to the dative; the latter expreſſing the action of giving, and the former that of taking away: thus, *ablatum eſt à me*, it was taken from me. It is ſometimes called the comparative caſe, as being much uſed in comparing things together: thus, *dulcior melle*, ſweeter than honey.

Ablative *abſolute*, among latin grammarians, is much the ſame with what in engliſh is called a parentheſis, as, *juvante Deo*, with God's aſſiſtance. It is called abſolute, becauſe governed by no other word.

ABLECTI, in roman antiquity, a ſelect body of ſoldiers, choſen from among thoſe called *extraordinarii*. See EXTRAORDINARII.

ABLEGMINA, in roman antiquity, choice parts of the entrails of victims, called alſo *proſiciæ*, *porriciæ*, *proſecta*, and *proſegmina*. The ablegmina, were ſprinkled with flour, and burnt on the altar: the prieſts pouring ſome wine on them.

ABLUENTS, in medicine, diluting medicines, or ſuch as diſſolve and carry off acrimonious and ſtimulating ſalts, in any part of the body, eſpecially the ſtomach and inteſtines.

ABLUTION, in a general ſenſe, ſignifies the waſhing or purifying ſomething with water.

Ablution, in a religious ſenſe, ſignifies a ceremony in uſe among the antients, and

ſtill

ſtill practiſed by the Mahometans: it conſiſted in waſhing the body, which was always done before ſacrificing, or even entering their temples. This cuſtom was probably derived from the Jews; ſince we read in ſcripture, that Solomon placed at the entry of the temple, which he erected to the true God, a great Laver which the text calls a Braſen ſea, where the prieſts waſhed themſelves before they offered ſacrifice, having before-hand ſanctified the water, by throwing into it the aſhes of a victim that was ſlain in ſacrifice.

Ablution, in the church of Rome, was a ſmall quantity of wine and water, which the communicants formerly took to waſh down, and promote the digeſtion of the hoſt. They ſtill uſe this term for the water, with which the prieſt waſhes his hands after conſecrating the hoſt.

ABLUTION, among chemiſts and apothecaries, is uſed for waſhing away the ſuperabundant ſalts of any body; an operation otherwiſe called edulcoration. See EDULCORATION.

ABLUTION, among phyſicians, is uſed either for waſhing the external parts of the body by baths; or deterging the bowels by thin diluting fluids, as water-gruel, whey, &c. Frequent ablutions with warm water are ſaid to diſpoſe the body to putrid diſeaſes, by relaxing its fibres; which is thought to be one reaſon, why the plague is ſo frequent in the turkiſh dominions; the Mahometan religion enjoining conſtant ablutions.

ABO, a city of Sweden, and capital of the province of Finland: it is ſituated in E. longitude 21° 30′. and N. latitude 60° 30′ at the mouth of the river Aurojoki, on the Bothnic gulph, about two hundred and forty miles N. E. of Stockholm.

ABOLISHING, the ſame with abolition. See the next article.

ABOLITION, in a general ſenſe, is uſed for deſtroying, or utterly eradicating ſomething.

ABOLITION, in law, denotes the repealing any law or ſtatute, and prohibiting ſome cuſtom, ceremony, &c. Sometimes alſo it ſignifies leave granted by the king, or a judge, to a criminal accuſer to forbear any farther proſecution.

Abolition is alſo uſed by antient civilians and lawyers, for deſiſting from, or annulling, a legal proſecution; for remitting the puniſhment of a crime; and for cancelling or diſcharging a public debt.

ABOLLA, a military garment, worn by the greek and roman ſoldiers: it was lined, or doubled, for warmneſs.

ABOMASUS, ABOMASUM, or ABOMASIUS, in comparative anatomy, names uſed for the fourth ſtomach of ruminating beaſts, or ſuch as chew the cud. Theſe have four ſtomachs, the firſt of which is called *venter*; the ſecond, *reticulum*; the third, *omaſus*; and the fourth, *abomaſus*.

It is in the abomaſus of calves and lambs that the runnet is found, uſed for curdling milk. See MILK and RUNNET.

ABORIGENES, in geography, a name given to the original or firſt inhabitants of any country; but more particularly uſed for the antient inhabitants of Latium, when Æneas with his Trojans came into Italy.

ABORTION, in medicine, an untimely or premature birth of a fœtus, otherwiſe called a miſcarriage; but if this happen before the ſecond month of pregnancy, it is only called a falſe conception.

Abortion, which is always a dangerous and but too often a fatal accident, may be owing to a multiplicity of cauſes; but the moſt frequent ones are immoderate fluxes of any kind, violent paſſions of the mind, ſtimulating medicines, ſtrong purges or vomits, ſudden commotions of the body, as running, leaping, falls, blows, &c. to which we may add a too frequent uſe of venery, copious bleeding in the foot, a debility or laxity of the womb, and a plethoric habit of body: this laſt is often the cauſe of abortion in young women, pregnant of their firſt child.

In order, therefore, to prevent abortion, the above cauſes muſt be carefully guarded againſt. It is likewiſe conducive to the ſame end, to bleed at proper times; as alſo to uſe ſtrengthening and attemperating medicines: ſuch are nitrous powders, dragon's blood, armenian bole, blood-ſtone, plantain-water, &c. Aſtringent plaſters are alſo ordered by Sydenham, to be applied to the region of the loins. However, it ought to be carefully attended to, not to give any thing reſtringent either internally or externally, when the abortion is become unavoidable. The ſigns of an approaching or threatened abortion, are, a ſudden flaccidity of the breaſts, a conſtriction or ſubſiding of the belly, a pain in the head and eyes, grinding pains in the ſtomach, coldneſs of the extremities, faintings, ſhiverings, &c.

As to the immediate forerunners of an abortion, they are these, violent pains in the loins and hips, a dilatation of the orifice of the womb, the formation of waters, an eruption of the same, a discharge of pure blood, or blood mixed with the waters.

When these symptoms appear, immediate delivery becomes absolutely necessary, without waiting for strong pains, which seldom return after the flooding is grown so excessive. This is performed in the same manner as for a timely birth, for which see DELIVERY and BIRTH.

Women subject to miscarriages must be very careful to avoid the usual causes of them, *viz.* all violent exercises, speaking loud, strong perfumes, disagreeable smells, and above all the embraces of their husbands: and upon the first appearance of an approaching abortion, they ought to confine themselves to their beds, till the symptoms either disappear, or till it becomes necessary to forward the delivery. Opiates mixed with restringents are greatly recommended for preventing an increase of the symptoms, and the bad consequences thereof, as they take off the stimulation, and thereby remove one great cause of the hæmorrhage so much to be dreaded. The following form is prescribed by Boerhaave: Take blood-stone powdered, armenian bole, and dragon's blood, of each a dram; also syrup of myrtle, an ounce; solid laudanum, three grains; and plantain-water, six ounces: mix all together, and let the patient take half an ounce of it every quarter of an hour.

ABORTION is also used for a fœtus, which, dying in the womb, continues there beyond the usual time of gestation.

ABORTION, among gardeners, signifies such fruits as are produced too early, and never arrive at maturity.

ABORTIVE, in a general sense, a term used for any thing which comes before its due time, or a design which miscarries.

ABORTIVE is, more particularly, used for any thing relating to an abortion, in which sense we say, *an abortive flux, abortive velom, &c.* See the articles FLUX and VELOM.

ABRA, a silver coin of Poland, nearly equivalent to the english shilling. See the article COIN.

The abra is current through all the dominions of the grand signior, where it passes for a fourth part of the dutch dollar, called aslani in the Levant.

ABRACADABRA, a spell or charm, worn about the neck as an amulet against several diseases, particularly the ague. See AMULET, CHARM, *&c.*

However, in order to give it the more virtue, it was to be written as many times as the word contains letters, omitting always the last letter of the former: thus,

ABRACADABRA
ABRACADABR
ABRACADAB
ABRACADA
ABRACAD
ABRACA
ABRAC
ABRA
ABR
AB
A

The whole makes a kind of inverted cone, which has this property, that beginning at the apex, and ascending from the last to the right, the letters always form the same word. According to Julius Africanus, the pronouncing the word in the same manner, will do as well.

ABRAHAMIANS, or ABRAHAMITES, in church history, heretics who renewed the errors of the Paulicians; a sect, who, to the doctrines of the Manichees, added an abhorrence of the cross, which they are said to have employed in most servile offices, out of mere despite.

This name is also used for another sect, who suffered death for the worship of images.

ABRASION, in medicine, the corroding or wearing of the intestines, by sharp and acrimonious humours, or medicines. To remedy this evil, emollient and obtunding medicines are recommended. See the article EMOLLIENTS.

ABRAXAS, a term sometimes used as synonymous with abracadabra. See the article ABRACADABRA.

ABRAXAS, in church-history, a mystical term expressing the supreme God, under whom the Basilidians supposed 365 dependent deities. It was the principle of the gnostic hierarchy, whence sprang their multitude of Æons. From abraxas proceeded the primigenial mind; from the primigenial mind, the logos, or word; from the logos, the phronesis, or prudence; from phronesis, sophia and dynamis, or wisdom and strength; from these two proceeded principalities, powers, and angels;

angels; from theſe other angels, to the number of 365, who were ſuppoſed to have the government of ſo many celeſtial orbs committed to their care.

ABRAXAS, among antiquaries, an antique gem or ſtone, with the word abraxas engraved on it. There are a great many kinds of them, of various figures and ſizes, moſtly as old as the third century.

ABRENUNCIATION, a term of the ſame import with renunciation. See the article RENUNCIATION.

ABRIDGING, the ſhortening, epitomizing, or contracting any book, matter, or thing.

ABRIDGING, in algebra, is the reducing a compound equation to a more ſimple form. See the article EQUATION.

To prevent the mind's being diſtracted with attending to known quantities, concerning which nothing further is required; and to keep the attention entire for the reſt; mathematicians uſe to abridge their equations, by expreſſing all the known quantities of the ſame term, by a ſingle letter.--For an inſtance: to abridge the equation

$$x^3 - axx + abx - abc = 0$$
$$-b \quad +ac$$
$$-c \quad +bc$$

All the known quantities $-a-b-c$ of the ſecond term are ſuppoſed equal to one ſingle letter $-n$: all the known quantities $+ab+ac+bc$ of the third term, equal to another letter $+p$: and all the known quantities $-abc$ of the fourth term to a ſingle letter $-q$. By which means we have $x^3 - nxx + q = 0$, inſtead of the equation propoſed.

ABRIDGMENT, in literary hiſtory, ſignifies much the ſame with an epitome, or abſtract of a large work. See EPITOME.

The perfection of an abridgment conſiſts in taking only what is material and ſubſtantial, and rejecting all ſuperfluities, whether of ſentiment or ſtyle: in which light, abridgments muſt be allowed to be uſeful performances. Abridgments are a very numerous kind of books: we have abridgments of the common law, of the ſtatutes, of the philoſophical tranſactions, of Locke on the human underſtanding, &c.

ABRIDGMENT, in law, the ſhortening a count, or declaration: thus, in aſſize, a man is ſaid to abridge his plaint, and a woman her demand in action of dower, if any land is put therein, which is not in the tenure of the defendant; for on a plea of non-tenure, in abatement of the writ, the plaintiff may leave out thoſe lands, and pray that the tenant may anſwer to the remainder. The reaſon is, that theſe writs run in general, and therefore ſhall be good for the reſt.

ABROCHMENT, or ABBROCHMENT, *abrochamentum*, in our old law-books, the ſame with foreſtalling. See the article FORESTALLING.

ABROGATION, *abrogation*, ſignifies the totally repealing and aboliſhing a law, in which ſenſe it differs from derogation, obrogation, &c. See DEROGATION, &c. There may be a great many reaſons for abrogating a law, as the inconvenience and bad conſequences ariſing from it, an alteration of circumſtances, a change in the face of affairs, &c. which may make the repealing it abſolutely neceſſary.

ABROTANUM, SOUTHERN-WOOD, in botany. See SOUTHERN-WOOD.

ABRUPTION, in ſurgery, the ſame with abduction. See ABDUCTION.

ABRUZZO, in geography, the name of two provinces of the K. of Naples, both lying on the gulph of Venice, and called the farther and nearer Abruzzo in regard to the city of Naples. The farther Abruzzo, is bounded on the weſt by the pope's territories, and ſeparated from the nearer Abruzzo by the river of Peſcara.

ABSCESS, in medicine and ſurgery, an inflammatory tumour, containing purulent matter, pent up in a fleſhy part.

Abſceſs is ſynonymous with apoſtem, impoſthume, and impoſthumation; and is always the effect of an inflammation, which frequently may be diſcuſſed without coming to a ſuppuration, or before an abſceſs is formed. See the articles INFLAMMATION, and TUMOUR.

When the tumour of an inflammation increaſes, together with the pain, heat, and pulſation depending thereon, and theſe ſymptoms continue three days, all applications, tending to reſolve the tumour, are to be left off; inſtead of which the ſurgeon ought to forward the ſuppuration, by applying emollient and maturating medicines to the part affected. Fats, oils, and glutinous ſubſtances anſwer this purpoſe, by obſtructing the pores of the ſkin. There are alſo a variety of herbs, fruits, ſeeds, roots, gums, and meals, which, if made into pultices, anſwer the ſame end. The moſt noted of theſe are galbanum, ſagapenum, ammoniacum,

BRITISH MUSEUM

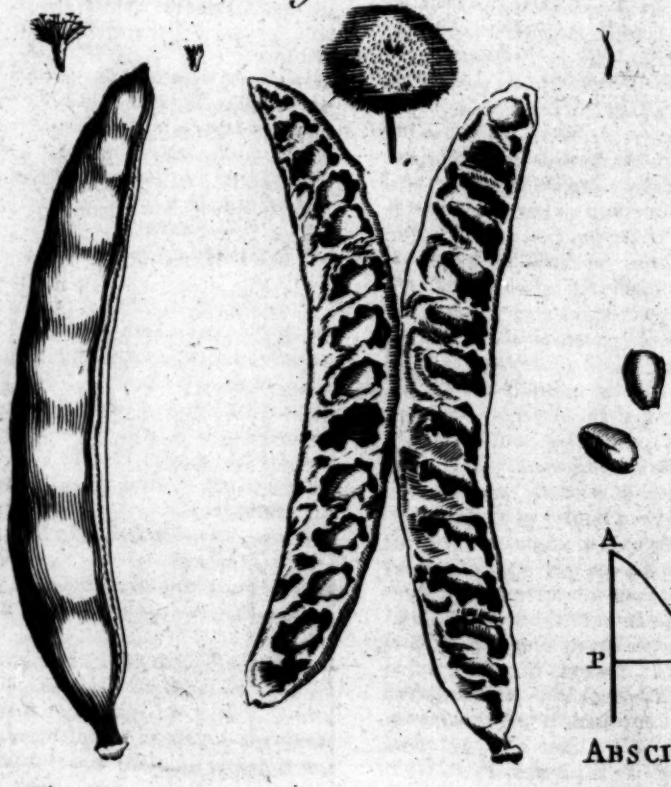
Fig. 1. ABSINTHIUM, or *WORMWOOD.*



Fig. 2. ABUTILON.



Fig. 3. ACACIA.



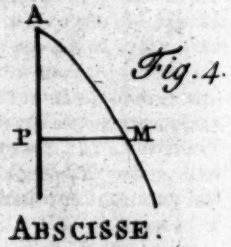


Fig. 4.

ABSCISSE.

T. Jefferys sculp.

niacum, bdellium, opopanax, among the gums: these must be dissolved in yolks of eggs, and some yest added. Marsh-mallows, lint-seed, fœnugreek-seed, figs, onions, &c. made in a pultice, with butter, yest, and honey, and often applied to the part hot, are accounted excellent for ripening abscesses, which is known to be the case, by the softness and whiteness of the tumours. See the article SUPPURATION.

When the abscess is well digested, it should be opened with a scalpel in the softest and most dependent part, that the matter may have the freer exit. If the abscess be large, the scalpel is not to be taken out immediately, but the incision farther inlarged. Thus, the putrid matter is to be let out, and, when glutinous, gently pressed forth with the hands. In making the incision, great care must be taken not to cut the large blood vessels, nerves, and tendons. As to the rest of the cure, it consists in thoroughly cleansing, and then healing the ulcer, with mundificative and balsamic medicines. See the article ULCER.

ABSCESS, in farriery, is a purulent tumour incident to several animals, as horses, sheep, poultry, &c.

In horses, a cataplasm, or pultice, of lime, reduced to a fine powder, and mixt with wine and oil in equal quantities, ought to be applied to the part affected; or one of wheat-flower, steeped in vinegar, with half an ounce of manna, may be used in its stead.

In sheep, the way is to open the tumour, in what part soever it is found, and after letting out the matter, to pour into the wound some melted pitch, and burnt salt powdered.

In poultry, they open the abscess with a pair of scissars, pressing out the corruption with their fingers; and then give them lettuce chopped small, and mixed with bran steeped in water, and sweetened with honey, to eat.

ABSCISSE, *abscissa*, in conic sections, the part A P, (see plate II. fig. 4) of the diameter of a curve line, intercepted between the vertex A of that diameter, and the point P. where any ordinate or semi-ordinate, M P, to that diameter, falls. From this definition it is evident, that there are an infinite number of variable abscisses in the same curve, as well as an infinite number of ordinates.

In the parabola, one ordinate has but one abscisse; in an ellipsis, it has two; in an hyperbola, consisting of two parts, it has also two; and in curves of the second and third order, it may have three and four.

ABSCISSION, *abscissio*, in rhetoric, a figure of speech, whereby the speaker stops short in the middle of his discourse: e. g. one of her age and beauty, to be seen alone, at such an hour, with a man of his character. I need say no more.

ABSCISSION, in surgery, is sometimes used for amputation, but more properly for cutting off some part of the body, when become any wise hurtful: thus we say the abscission of the præpuce, of a lip, &c.

ABSINTHIATED *medicines*, those impregnated with the virtues of *absinthium*, or worm-wood: thus we say, absinthiated wine, absinthiated ale, absinthiated water, &c. See the next article.

ABSINTHIUM, WORM-WOOD, in botany, a species of artemisia. See the article ARTEMISIA. See also plate II. fig. 1. which represents the flowers and seeds of worm-wood.

Worm-wood is greatly commended for its medicinal virtues: it strengthens the stomach, removes obstructions of the liver and spleen, creates an appetite, and destroys worms. It is also used in other intentions, for which see the article WORM-WOOD.

ABSIS, in astronomy, the same with apsis. See the article APSIS.

ABSOLUTE, in a general sense, denotes something which is unconnected with, or independent on others.

Among metaphysicians, an absolute being is one whose existence depends on no external cause, or that exists by a necessity of its own nature.

ABSOLUTE is also an epithet applied to things which are free from limitations or conditions: thus we say, an absolute decree, absolute promise, &c. See DECREE, PROMISE, &c.

ABSOLUTELY, in a general sense, that quality or manner of acting whereby a person, action, or thing, is denominated absolute.

ABSOLUTELY, among divines, is used for completely, or with full power and effect, independently of any thing else: thus catholics hold, that the priest forgives sins absolutely; whereas protestant divines do it only declaratively.

ABSOLUTELY, in geometry, signifies, entirely or perfectly: thus, absolutely round is the same as perfectly round.

ABSOLUTION, in a general sense, the

act of forgiving, pardoning, or releaſing.

ABSOLUTION, among civilians, is uſed for a definitive ſentence, declaring the accuſed perſon innocent, and releaſing him from all farther proſecution.

ABSOLUTION, among catholics, a power aſſumed by the prieſts to forgive ſins abſolutely, that is, by virtue of a power inherent in themſelves. By ſtat. 23 Eliz. to procure abſolutions from Rome is declared to be high treaſon.

Proteſtant divines pretend to no ſuch power, but only declare the ſcripture terms of pardon.

ABSOLUTION, in the preſbyterian church, is chiefly uſed for a ſentence of the church-judicatories, releaſing a man from excommunication, and receiving him again into communion.

Abſolutio ad cautelam, is a proviſional abſolution, granted to a perſon who has appealed from a ſentence of excommunication.

ABSOLUTIO *a ſævis*, in the roman chancery, is the taking off a ſuſpenſion or cenſure, incurred by ſome of their clergy.

ABSOLUTISM, in matters of theology, a doctrine charged on the calviniſts; whereby God is ſuppoſed to act from mere pleaſure, in regard to the ſalvation of mankind. Abſolutiſm is the grand obſtacle to an union between the lutherans and calviniſts.

ABSORBENTS, in the materia medica, ſuch medicines as have the power of drying up redundant humours, whether applied to ulcers, or taken inwardly.

Teſtaceous powders, boles, chalk, calcined bones, *&c.* are eſteemed the moſt powerful abſorbents; which are chiefly given in diſorders, ariſing from too great an abundance of acids in the ſtomach.

It is a neceſſary precaution, to drink diluting liquors along with abſorbents; alſo to take gentle purges, as well during the uſe of them, as when they are left off.

ABSORBENT *Veſſels*, in anatomy, a name peculiarly given to the lacteals opening into the inteſtines, and ſerving to imbibe the nutritious juice. See the article LACTEAL VESSELS.

The pores diffuſed over the body are ſometimes alſo called by this name, from their imbibing air, effluvia, *&c.*

ABSORBENT *Veſſels* is alſo a name uſed by ſome naturaliſts for the fibres of the roots of plants, which draw nouriſhment from the ſurrounding earth. See the article ROOT.

ABSORBING, the ſwallowing up, ſucking up, or imbibing any thing: thus black bodies are ſaid to abſorb the rays of light; luxuriant branches, to abſorb or waſte the nutricious juices, which ſhould feed the fruit of trees, *&c.*

ABSORPTION, the effects of abſorbing. See the article ABSORBING.

Thus we read of abſorptions of the earth, when large tracts of land have been ſwallowed up.

ABSTEMIOUS, an epithet given to perſons who uſe a ſpare diet, but more eſpecially to thoſe who abſtain from wine.

ABSTEMIOUS, *abſtemii*, in church-hiſtory, a name given to ſuch perſons as could not partake of the cup of the euchariſt, on account of their natural averſion to wine.

Calviniſts allow theſe to communicate in the ſpecies of bread only, touching the cup with their lip; which is deemed a profanation by the lutherans.

ABSTENTUS, among civilians, an heir who is with-held by his tutor from entering upon his inheritance.

Eccleſiaſtical writers likewiſe uſe the word *abſtentus* for an excommunicated perſon.

ABSTERGENTS, in the materia medica, medicines proper for cleanſing the body from concretions and other impurities, not to be effected by ſimple abluents.

Abſtergents are of a ſaponaceous nature, and therefore very different from mere abluents, tho' Caſtellus repreſents them as the ſame.

ABSTINENCE, *abſtinentia*, the abſtaining or refraining from certain enjoyments; but more eſpecially, from eating and drinking: thus the Jews were obliged, by the law of Moſes, to abſtain from their wives on certain occaſions; and it has always been a practice, to abſtain from a luxuriant diet at ſtated times, as well out of a religious view, as to confirm and preſerve health. See the article FAST.

Abſtinence is highly extolled by ſome phyſicians, and that juſtly, when no more is meant by it but a proper regimen: but it muſt have bad conſequences, when indulged without a due regard to the conſtitution, age, ſtrength, *&c.* of the perſon who practiſes it.

ABSTINENTES, in church-hiſtory, a ſect of antient heretics, who carried abſtinence and mortification to an exceſſive length.

ABSTRACT *idea*, among logicians, the idea

idea of ſome general quality or property conſidered ſimply in itſelf, without any reſpect to a particular ſubject: thus, magnitude, equity, &c. are abſtract ideas, when we conſider them as detached from any particular body or perſon.

It is generally allowed, that there are no objects in nature correſponding to abſtract ideas: nay, ſome philoſophers, and particularly the late lord Bolingbroke, diſpute the exiſtence of abſtract ideas themſelves, thinking it impoſſible for the human mind to form any ſuch. Abſtract ideas are the ſame with thoſe called univerſal ones, and the manner of forming them, according to modern philoſophers, is this: we readily obſerve a reſemblance among ſome of our particular ideas, and thereby get a general notion applicable to many individuals. Thus, horſes are found to reſemble each other in ſhape, voice, and the general configuration of their parts. Now, the idea which takes in this reſemblance, excluding what is peculiar to each individual, becomes of courſe common to this whole family or claſs of animals, and is therefore called a general, univerſal, or abſtract idea. See ABSTRACTION and IDEA.

ABSTRACT *terms* or *words*, thoſe made uſe of to denote abſtract ideas. See the article ABSTRACT *idea*.

ABSTRACT is alſo an epithet given to ſeveral other things on account of their purity, or univerſality: thus, we ſay abſtract numbers, abſtract mathematics, &c. See NUMBER and MATHEMATICS.

ABSTRACT, in matters of literature, a conciſe but general view, or analyſis, of ſome large work; in which ſenſe, it differs from an abridgment only as being ſhorter, and its entering leſs minutely into particulars; and from an extract, as this laſt is only a particular view of ſome part or paſſage of it.

ABSTRACTION, in logic, that operation of the mind whereby it forms abſtract ideas. See the article ABSTRACT, *ſupra*.

The faculty of abſtraction ſtands directly oppoſite to that of compounding. By compoſition we conſider thoſe things together, which, in reality, are not joined together in any one exiſtence. And by abſtraction, we conſider thoſe things ſeparately and apart, which, in reality, do not exiſt apart. See COMPOSITION. According to the celebrated Mr. Locke, abſtraction is performed three ways. Firſt, when the mind conſiders any one part of a thing by itſelf, without attending to the whole, as the arm, leg, &c. of a man's body. Secondly, by conſidering the mode of a ſubſtance, without taking in the idea of the ſubſtance itſelf: thus, geometricians conſider the properties of lines, or the length of bodies, without attending to their breadth or depth. Thirdly, by generalizing our ideas in the manner mentioned under ABSTRACT *idea*.

This doctrine, however, of abſtraction, is denied by Dr. Berkeley, the late biſhop of Cloyne, who owns that he can imagine a man with two heads, or the upper part of a man joined to the body of a horſe: nay, adds he, I can conſider the hand, the eye, the noſe, each by itſelf, abſtracted or ſeparate from the reſt of the body, but then whatever hand or eye I imagine, it muſt have ſome particular ſhape and colour; likewiſe the idea of a man that I frame to myſelf, muſt be either of a white or a black, or a tawney, a ſtraight or crooked, a tall or a low or a middle ſized man. Neither can I, by any effort or thought, conceive an abſolutely abſtracted idea, of motion for inſtance, diſtinct from the body moving, and which is neither ſwift nor ſlow, curvilinear, nor rectilinear; and the like may be ſaid of all abſtract ideas whatſoever.

ABSTRACTION, in chemiſtry, the evaporating or drawing off a menſtruum from the ſubject it had been put to diſſolve. Some alſo uſe the word abſtraction, as ſynonymous with diſtillation and cohobation.

ABSTRACTITIOUS, or ABSTRACTIVE, a term uſed by ſome chemiſts for a ſpirit drawn from vegetables, without fermentation.

ABSTRUSE, a term denoting ſomething that is difficult, dark, obſcure, and not eaſy to be underſtood, and accordingly oppoſed to what is plain and obvious. Thus, metaphyſics is an abſtruſe ſcience, as is the new doctrine of infinite ſeries.

ABSURD, an epithet given to any action, ſentiment, &c. which contradicts or runs counter to a manifeſt truth, or to the received opinions of mankind: thus, it would be abſurd to affirm, that twelve inches are not equal to a foot: when applied to actions, abſurd is ſynonymous with ridiculous. See the articles RIDICULE and ABSURDITY.

There is an argument, called *reductio ad*

act of forgiving, pardoning, or releaſing.

ABSOLUTION, among civilians, is uſed for a definitive ſentence, declaring the accuſed perſon innocent, and releaſing him from all farther proſecution.

ABSOLUTION, among catholics, a power aſſumed by the prieſts to forgive ſins abſolutely, that is, by virtue of a power inherent in themſelves. By ſtat. 23 Eliz. to procure abſolutions from Rome is declared to be high treaſon.

Proteſtant divines pretend to no ſuch power, but only declare the ſcripture terms of pardon.

ABSOLUTION, in the preſbyterian church, is chiefly uſed for a ſentence of the church-judicatories, releaſing a man from excommunication, and receiving him again into communion.

Abſolutio ad cautelam, is a proviſional abſolution, granted to a perſon who has appealed from a ſentence of excommunication.

ABSOLUTIO *a ſævis*, in the roman chancery, is the taking off a ſuſpenſion or cenſure, incurred by ſome of their clergy.

ABSOLUTISM, in matters of theology, a doctrine charged on the calviniſts; whereby God is ſuppoſed to act from mere pleaſure, in regard to the ſalvation of mankind. Abſolutiſm is the grand obſtacle to an union between the lutherans and calviniſts.

ABSORBENTS, in the materia medica, ſuch medicines as have the power of drying up redundant humours, whether applied to ulcers, or taken inwardly.

Teſtaceous powders, boles, chalk, calcined bones, &c. are eſteemed the moſt powerful abſorbents; which are chiefly given in diſorders, ariſing from too great an abundance of acids in the ſtomach.

It is a neceſſary precaution, to drink diluting liquors along with abſorbents; alſo to take gentle purges, as well during the uſe of them, as when they are left off.

ABSORBENT *Veſſels*, in anatomy, a name peculiarly given to the lacteals opening into the inteſtines, and ſerving to imbibe the nutritious juice. See the article LACTEAL VESSELS.

The pores diffuſed over the body are ſometimes alſo called by this name, from their imbibing air, effluvia, &c.

ABSORBENT *Veſſels* is alſo a name uſed by ſome naturaliſts for the fibres of the roots of plants, which draw nouriſhment from the ſurrounding earth. See the article ROOT.

ABSORBING, the ſwallowing up, ſucking up, or imbibing any thing: thus black bodies are ſaid to abſorb the rays of light; luxuriant branches, to abſorb or waſte the nutricious juices, which ſhould feed the fruit of trees, &c.

ABSORPTION, the effects of abſorbing. See the article ABSORBING.

Thus we read of abſorptions of the earth, when large tracts of land have been ſwallowed up.

ABSTEMIOUS, an epithet given to perſons who uſe a ſpare diet, but more eſpecially to thoſe who abſtain from wine.

ABSTEMIOUS, *abſtemii*, in church-hiſtory, a name given to ſuch perſons as could not partake of the cup of the euchariſt, on account of their natural averſion to wine.

Calviniſts allow theſe to communicate in the ſpecies of bread only, touching the cup with their lip; which is deemed a profanation by the lutherans.

ABSTENTUS, among civilians, an heir who is with-held by his tutor from entering upon his inheritance.

Eccleſiaſtical writers likewiſe uſe the word *abſtentus* for an excommunicated perſon.

ABSTERGENTS, in the materia medica, medicines proper for cleanſing the body from concretions and other impurities, not to be effected by ſimple abluents.

Abſtergents are of a ſaponaceous nature, and therefore very different from mere abluents, tho' Caſtellus repreſents them as the ſame.

ABSTINENCE, *abſtinentia*, the abſtaining or refraining from certain enjoyments; but more eſpecially, from eating and drinking: thus the Jews were obliged, by the law of Moſes, to abſtain from their wives on certain occaſions; and it has always been a practice, to abſtain from a luxuriant diet at ſtated times, as well out of a religious view, as to confirm and preſerve health. See the article FAST.

Abſtinence is highly extolled by ſome phyſicians, and that juſtly, when no more is meant by it but a proper regimen: but it muſt have bad conſequences, when indulged without a due regard to the conſtitution, age, ſtrength, &c. of the perſon who practiſes it.

ABSTINENTES, in church-hiſtory, a ſect of antient heretics, who carried abſtinence and mortification to an exceſſive length.

ABSTRACT *idea*, among logicians, the idea

idea of ſome general quality or property conſidered ſimply in itſelf, without any reſpect to a particular ſubject: thus, magnitude, equity, &c. are abſtract ideas, when we conſider them as detached from any particular body or perſon.

It is generally allowed, that there are no objects in nature correſponding to abſtract ideas: nay, ſome philoſophers, and particularly the late lord Bolingbroke, diſpute the exiſtence of abſtract ideas themſelves, thinking it impoſſible for the human mind to form any ſuch.

Abſtract ideas are the ſame with thoſe called univerſal ones, and the manner of forming them, according to modern philoſophers, is this: we readily obſerve a reſemblance among ſome of our particular ideas, and thereby get a general notion applicable to many individuals. Thus, horſes are found to reſemble each other in ſhape, voice, and the general configuration of their parts. Now, the idea which takes in this reſemblance, excluding what is peculiar to each individual, becomes of courſe common to this whole family or claſs of animals, and is therefore called a general, univerſal, or abſtract idea. See ABSTRACTION and IDEA.

ABSTRACT *terms* or *words*, thoſe made uſe of to denote abſtract ideas. See the article ABSTRACT *idea*.

ABSTRACT is alſo an epithet given to ſeveral other things on account of their purity, or univerſality: thus, we ſay abſtract numbers, abſtract mathematics, &c. See NUMBER and MATHEMATICS.

ABSTRACT, in matters of literature, a conciſe but general view, or analyſis, of ſome large work; in which ſenſe, it differs from an abridgment only as being ſhorter, and its entering leſs minutely into particulars; and from an extract, as this laſt is only a particular view of ſome part or paſſage of it.

ABSTRACTION, in logic, that operation of the mind whereby it forms abſtract ideas. See the article ABSTRACT, *ſupra*.

The faculty of abſtraction ſtands directly oppoſite to that of compounding. By compoſition we conſider thoſe things together, which, in reality, are not joined together in any one exiſtence. And by abſtraction, we conſider thoſe things ſeparately and apart, which, in reality, do not exiſt apart. See COMPOSITION.

According to the celebrated Mr. Locke, abſtraction is performed three ways. Firſt, when the mind conſiders any one part of a thing by itſelf, without attending to the whole, as the arm, leg, &c. of a man's body. Secondly, by conſidering the mode of a ſubſtance, without taking in the idea of the ſubſtance itſelf: thus, geometricians conſider the properties of lines, or the length of bodies, without attending to their breadth or depth. Thirdly, by generalizing our ideas in the manner mentioned under ABSTRACT *idea*.

This doctrine, however, of abſtraction, is denied by Dr. Berkeley, the late biſhop of Cloyne, who owns that he can imagine a man with two heads, or the upper part of a man joined to the body of a horſe: nay, adds he, I can conſider the hand, the eye, the noſe, each by itſelf, abſtracted or ſeparate from the reſt of the body, but then whatever hand or eye I imagine, it muſt have ſome particular ſhape and colour; likewiſe the idea of a man that I frame to myſelf, muſt be either of a white or a black, or a tawney, a ſtraight or crooked, a tall or a low or a middle ſized man. Neither can I, by any effort of thought, conceive an abſolutely abſtracted idea, of motion for inſtance, diſtinct from the body moving, and which is neither ſwift nor ſlow, curvilinear, nor rectilinear; and the like may be ſaid of all abſtract ideas whatſoever.

ABSTRACTION, in chemiſtry, the evaporating or drawing off a menſtruum from the ſubject it had been put to diſſolve. Some alſo uſe the word abſtraction, as ſynonymous with diſtillation and cohobation.

ABSTRACTITIOUS, or ABSTRACTIVE, a term uſed by ſome chemiſts for a ſpirit drawn from vegetables, without fermentation.

ABSTRUSE, a term denoting ſomething that is difficult, dark, obſcure, and not eaſy to be underſtood, and accordingly oppoſed to what is plain and obvious. Thus, metaphyſics is an abſtruſe ſcience, as is the new doctrine of infinite ſeries.

ABSURD, an epithet given to any action, ſentiment, &c. which contradicts or runs counter to a manifeſt truth, or to the received opinions of mankind: thus, it would be abſurd to affirm, that twelve inches are not equal to a foot: when applied to actions, abſurd is ſynonymous with ridiculous. See the articles RIDICULE and ABSURDITY.

There is an argument, called *reductio ad*

ad abſurdum; which proves a thing to be true, by ſhewing the abſurdity of the contrary ſuppoſition.

ABSURDITY, that error by which any thing may be denominated abſurd. See the article ABSURD.

The great cauſe of abſurdity, is in ſpeech. As reaſon conſiſts in the due uſe of names and words, abſurdity conſiſts in the abuſe of them. The higheſt of all our faculties, and our failings, take their riſe from the ſame thing, language; and are as it were well coupled together, to temper each other, and reduce human nature to a kind of mediocrity.

Hobbes aſſigns abſurdity as a privilege peculiar to man, and which no other creature is capable of: he adds, that of all men, thoſe called philoſophers, are moſt expoſed to it. Whence the ſaying of Cicero: there is nothing ſo abſurd but has been ſaid by a philoſopher, *nihil tam abſurde dici poteſt, quod non dicatur a philoſopho.* The reaſon ſeems to be, that of all men they reaſon, and diſcourſe moſt. Yet a nearer and more appoſite cauſe may be aſſigned; viz. their neglect at ſetting out, to define the terms they make uſe of, *i. e.* to aſſign the preciſe idea each is made to repreſent: which is much like a man's undertaking to number, without knowing the value of the numeral figures; reaſoning, according to the author firſt cited, being no other than computing.

Divers abſurdities alſo ariſe from the wrong connecting names into propoſitions; as firſt, when the names of bodies are applied to accidents; or the names of accidents to bodies: as in that propoſition, faith is infuſed, or inſpired; ſince nothing is either fuſible, or inſpirable, but body: and the ſame abſurdity the Carteſians fall into, when they make extenſion to conſtitute body, *&c.* Secondly, when the names of accidents inherent in external bodies are attributed to accidents of our own bodies; as when it is ſaid that colour is in the object, ſound in the air, *&c.* Thirdly, when the names of bodies are attributed to words, or conceptions; as is done by thoſe who aſſert that there are univerſal things, that animal is a genus, *&c.* Fourthly, when the names of accidents are given to words, and propoſitions; as when it is ſaid that the definition is the nature of the thing, or a perſon's command, is his will. Fifthly, when in lieu of proper words, metaphors and tropes are made uſe of; as, the way leads to ſuch a place, the proverb ſays this or that: which though allowable on ordinary occaſions, yet is of miſchievous conſequence in reaſoning and ſearching after truth. Laſtly, when names are taken at random, and uſed without meaning, as tranſubſtantiation, conſubſtantiation, entelechia, *&c.*

He that can avoid theſe rocks will not eaſily fall into an abſurdity, except in a very long chain of reaſoning, when he may be apt to forget ſome propoſition before laid down.

ABSYNTHIUM, the ſame with abſinthium. See ABSINTHIUM.

ABUCCO, ABOCCO, or ABOCCHI, a weight uſed in the kingdom of Pegu, equal to twelve teccalis and a half. Two abuccos make an agiro, or giro; two giri make half a biza, which weighs 100 heccalis, that is to ſay, 2 pound 5 ounces the heavy weight, or 3 pounds 9 ounces light weight of Venice.

ABUNDANT *numbers*, thoſe whoſe parts added together make more than the whole number: thus the parts of 20, make 22, *viz.* 1, 2, 4, 5, 10.

ABUSE, in a general ſenſe, the perverting ſomething from its true deſign, purpoſe, or intention.

ABUSE *of words*, is the uſing them without any clear and diſtinct ideas, or without any idea at all. See ABSURDITY.

Self-ABUSE, a phraſe ſometimes uſed for the crime of ſelf-pollution. See POLLUTION.

ABUTALS, the boundaries of a piece of land.

ABUTILON, in botany, is, according to Linnæus, a ſpecies of ſida, the flower of which reſembles that of the mallow, but the fruit is a kind of head compoſed of ſeveral bivalve capſules: theſe are affixed to an axis, and uſually contain kidney-ſhaped ſeeds. See Plate II. fig. 2. and the article SIDA.

The abutilon is diuretic and vulnerary; its leaves, applied to ulcers and ſores, ſerve to cleanſe them; and its ſeeds taken inwardly, promote urine, and expel the gravel.

ABYSS, in a general ſenſe, ſignifies any unfathomable depth, or an immenſe collection of waters.

ABYSS, more particularly, denotes a vaſt cavern or hollow receptacle, in the center of the earth, filled with water; the exiſtence of which has been diſputed by ſome, and defended by other naturaliſts. To it has been attributed the origin of ſprings,

ſprings, the level maintained in the ſurfaces of different ſeas, and their not overflowing their banks, &c. But the queſtion, whether there be ſuch an abyſs or no, ſeems yet undetermined. See the articles EARTH and DELUGE.

ABYSS is alſo uſed for ſeveral other things, as the cavernous bowels of a mountain, or hell, or the bottomleſs pit, the center of an eſcutcheon, a gulph, &c.

ABYSS, in antiquity, a name given to the temple of Proſerpine.

ABYSS, among alchemiſts, is uſed by ſome for the immediate receptacle of the ſeminal matter, and by others for the firſt matter itſelf.

ABYSS, in a metaphorical ſenſe, is applied to any thing that is inſcrutable, or incomprehenſible: thus, the judgments of God are called a great abyſs.

ABYSSINIA, a large empire of Africa, otherwiſe called Ethiopia. See the article ETHIOPIA.

ABYSSINIAN church, that eſtabliſhed in the empire of Abyſſinia: it makes only a branch of the Cophts or Jacobites, a ſect of heretics who admit only one nature in Jeſus Chriſt.

ACACIA, in botany, a ſpecies of mimoſa, the flower of which conſiſts of only one infundibuliform leaf, containing a number of ſtamina: the flowers are uſually collected in cluſters or little heads. The piſtil ariſes from the bottom of the flower, and at length becomes a flat pod, five or ſix inches long, and divided into ſeveral hollow partitions, containing a number of roundiſh ſeeds. See plate II. fig. 3. and the article MIMOSA.

There are a great many varieties of acacia, all which may be propagated with us on hot beds. They belong to the polyandria claſs of Linnæus, and are cultivated by the Chineſe for the ſake of their flowers: theſe they uſe in dying that beautiful yellow, which we find bears waſhing in their ſilks and ſtuffs.

ACACIA, in the materia medica of the antients, a gum made from the egyptian acacia-tree, and thought to be the ſame with our gum-arabic.

ACACIA *germanica*, an inſpiſſated juice, made of wild ſloes, hardly ripe. The true acacia is ſaid to be very ſcarce in the ſhops, where the german acacia is uſed in its ſtead, both being powerful aſtringents, and conſequently good in hæmorrhages, and all kinds of fluxes.

ACACIA, or AKAKIA, in antiquity, a roll or bag repreſented on the medals of the greek and roman emperors: ſome think it is only a handkerchief, which they uſed as a ſignal; others take it for a volume, or roll of memorandums or petitions; and finally, others will have it to be a purple bag filled with earth, to remind the prince of his mortality.

ACADEMIC, ACADEMICIAN, or ACADEMIST, a member of a modern academy. See the article ACADEMY.

ACADEMICS is more particularly uſed for a ſect of antient philoſophers, who maintained that all things were uncertain, and conſequently that men ought to doubt of every thing. They even went ſo far, as to doubt whether or no they ought to doubt; it being a received maxim among them, *ſe nil ſcire, ne hoc quidem, quod nihil ſciant.*

Of this ſect, Socrates and Plato were the founders. Cicero, who was an academic philoſopher himſelf, gives a more favourable account of them. He tells us, that all the difference between the academics, and thoſe who imagined themſelves poſſeſſed of the knowledge of things, conſiſted in this: that the latter were fully perſuaded of the truth of their opinions; whereas the former held many things to be only probable, which might very well ſerve to regulate their conduct, though they could not poſitively aſſert the certainty of them. In this, ſays he, we have greatly the advantage of the dogmatiſts, as being more diſengaged, more unbiaſſed, and at full liberty to determine as our judgment ſhall direct. But the generality of mankind, I know not how, are fond of error; and chooſe rather to defend, with the utmoſt obſtinacy, the opinion they have once embraced, than with candour and impartiality, examine which ſentiments are moſt agreeable to truth. Academ. II. 3.

This paſſage alone, if there were no other proof, is a ſufficient vindication of the academics from the charge of Pyrrhoniſm. See PYRRHONIANS.

ACADEMY, in grecian antiquity, a large villa in one of the ſuburbs of Athens, where the ſect of philoſophers called academics held their aſſemblies. It took its name from one Academus or Ecademus, a citizen of Athens; as our modern academies take theirs from it.

This term was alſo uſed metaphorically, to denote the ſect of academic philoſophers. See the laſt article.

ACADEMY, in a modern ſenſe, ſignifies a ſociety of learned men, eſtabliſhed for the improve-

improvement of arts or ſciences. Some authors confound academy with univerſity; but though much the ſame in latin, they are very different in engliſh. An univerſity is properly a body compoſed of graduates in the ſeveral faculties; of profeſſors, who teach in the public ſchools; of regents, or tutors, and ſtudents who learn under them, and aſpire likwiſe to degrees. Whereas an academy is not intended to teach or profeſs any art, ſuch as it is, but improve it: it is not for novices to be inſtructed in, but for thoſe that are more knowing; for perſons of diſtinguiſhed abilities to confer in, and communicate their lights and diſcoveries to each other, for their mutual benefit and improvement. See the article UNIVERSITY.

ACADEMIES *of antiquity*, are thoſe deſigned for the illuſtration of whatever regards antiquity, as medals, coins, inſcriptions, *&c.*

There are ſeveral academies of this kind in different parts of the world, as at Upſal in Sweden, at Cortona in Tuſcany, at Paris, and at London: theſe two laſt are called, one the academy of inſcriptions and belles lettres, and the other the antiquarian ſociety. See ANTIQUARY.

ACADEMIES *of architecture*. See ACADEMIES *of painting*, infra.

ACADEMIES *of belles lettres*, thoſe chiefly deſigned for the cultivation of eloquence and poetry. Beſides the academy of belles lettres at Paris, and one at Caen, there are ſeveral in Italy, *viz.* one at Florence, and two at Rome.

Chirurgical ACADEMIES, thoſe eſtabliſhed for the improvement of ſurgery: ſuch is that lately inſtituted at Paris; the members of which are not only to publiſh their own and correſpondents obſervations and improvements, but to give an account of all that is publiſhed in ſurgery, and to compoſe a complete hiſtory of this art, by their extracts from all the authors, antient and modern, who have wrote on it. A queſtion in ſurgery is to be propoſed by the academy yearly; and a prize of a gold medal of two hundred livres value to be given him, who furniſhes the moſt ſatisfactory anſwer.

Coſmographical ACADEMIES, thoſe which make geography and aſtronomy the chief objects of their reſearches: ſuch is that called the *argonauts*, at Venice.

ACADEMIES *of dancing*. Of this kind there was one inſtituted by Lewis XIV, with ample privileges.

Eccleſiaſtical ACADEMIES, thoſe which employ their ſtudies in illuſtrating the doctrines, diſcipline, ceremonies, *&c.* that obtained in each age of the church: ſuch is that of Bologna.

Hiſtorical ACADEMIES, thoſe erected for the improvement of hiſtory; ſuch are thoſe at Liſbon and Tubingen.

ACADEMY *of inſcriptions*, *&c.* See ACADEMIES *of antiquity*, ſupra.

ACADEMIES *of languages*, thoſe eſtabliſhed in many parts of Europe, for refining and aſcertaining the language of each country; thus the Paris academy is deſigned to illuſtrate and poliſh the french; that of Madrid, the ſpaniſh or caſtilian, *&c.* But beſides theſe, there others in Italy, Germany, *&c.*

ACADEMIES *of Law*: ſuch are thoſe of Bologna and Beryta.

Medical ACADEMIES, thoſe inſtituted with a view to promote medical knowledge and improvements: ſuch is that of the *Naturæ Curioſorum*, in Germany, and thoſe of Venice, Geneva, Palermo, *&c.* to which ſome add the colleges of phyſicians at London and Edinburgh.

Muſical ACADEMIES. Theſe are frequent in moſt parts of Europe, but more eſpecially in France and Italy.

ACADEMIES *of painting, ſculpture*, and *architecture*. There is one of theſe at Paris, and another at Rome.

The academy at Paris conſiſting of the moſt eminent maſters in painting and ſculpture, was founded by M. de Noyers, ſecretary of ſtate to Lewis XIII. This academy at firſt conſiſted of about twenty-five perſons, *viz.* twelve officers called ancients, eleven private members, and two ſyndics. But at preſent it conſiſts of forty painters and ſculptors. There are four perpetual rectors nominated by the king, a director, a chancellor, a ſecretary who keeps the regiſter, and countерſigns the diſpatches; a treaſurer, twelve profeſſors, adjuncts to the rectors and profeſſors, ſix chancellors, a profeſſor for that part of anatomy which relates to painting, and another for perſpective. The academy at Rome was eſtabliſhed by Lewis XIV, and here thoſe who have won the annual prize in the academy at Paris, are received and entertained for three years, and have a penſion from the king, to give them an opportunity of perfecting themſelves. The academy at Paris ſends one of their governors for its preſident.

ACADEMIES *of ſciences*, thoſe chiefly deſigned

BRITISH MUSEUM

improvement of arts or ſciences. Some authors confound academy with univerſity; but though much the ſame in latin, they are very different in engliſh. An univerſity is properly a body compoſed of graduates in the ſeveral faculties; of profeſſors, who teach in the public ſchools; of regents, or tutors, and ſtudents who learn under them, and aſpire likwiſe to degrees. Whereas an academy is not intended to teach or profeſs any art, ſuch as it is, but improve it: it is not for novices to be inſtructed in, but for thoſe that are more knowing; for perſons of diſtinguiſhed abilities to confer in, and communicate their lights and diſcoveries to each other, for their mutual benefit and improvement. See the article UNIVERSITY.

ACADEMIES *of antiquity*, are thoſe deſigned for the illuſtration of whatever regards antiquity, as medals, coins, inſcriptions, *&c.*

There are ſeveral academies of this kind in different parts of the world, as at Upſal in Sweden, at Cortona in Tuſcany, at Paris, and at London: theſe two laſt are called, one the academy of inſcriptions and belles lettres, and the other the antiquarian ſociety. See ANTIQUARY.

ACADEMIES *of architecture*. See ACADEMIES *of painting*, infra.

ACADEMIES *of belles lettres*, thoſe chiefly deſigned for the cultivation of eloquence and poetry. Beſides the academy of belles lettres at Paris, and one at Caen, there are ſeveral in Italy, *viz.* one at Florence, and two at Rome.

Chirurgical ACADEMIES, thoſe eſtabliſhed for the improvement of ſurgery: ſuch is that lately inſtituted at Paris; the members of which are not only to publiſh their own and correſpondents obſervations and improvements, but to give an account of all that is publiſhed in ſurgery, and to compoſe a complete hiſtory of this art, by their extracts from all the authors, antient and modern, who have wrote on it. A queſtion in ſurgery is to be propoſed by the academy yearly; and a prize of a gold medal of two hundred livres value to be given him, who furniſhes the moſt ſatisfactory anſwer.

Coſmographical ACADEMIES, thoſe which make geography and aſtronomy the chief objects of their reſearches: ſuch is that called the *argonauts*, at Venice.

ACADEMIES *of dancing*. Of this kind there was one inſtituted by Lewis XIV, with ample privileges.

Eccleſiaſtical ACADEMIES, thoſe which employ their ſtudies in illuſtrating the doctrines, diſcipline, ceremonies, *&c.* that obtained in each age of the church: ſuch is that of Bologna.

Hiſtorical ACADEMIES, thoſe erected for the improvement of hiſtory; ſuch are thoſe at Liſbon and Tubingen.

ACADEMY *of inſcriptions*, *&c.* See ACADEMIES *of antiquity*, ſupra.

ACADEMIES *of languages*, thoſe eſtabliſhed in many parts of Europe, for refining and aſcertaining the language of each country; thus the Paris academy is deſigned to illuſtrate and poliſh the french; that of Madrid, the ſpaniſh or caſtilian, *&c.* But beſides theſe, there others in Italy, Germany, *&c.*

ACADEMIES *of Law*: ſuch are thoſe of Bologna and Beryta.

Medical ACADEMIES, thoſe inſtituted with a view to promote medical knowledge and improvements: ſuch is that of the *Naturæ Curioſorum*, in Germany, and thoſe of Venice, Geneva, Palermo, *&c.* to which ſome add the colleges of phyſicians at London and Edinburgh.

Muſical ACADEMIES. Theſe are frequent in moſt parts of Europe, but more eſpecially in France and Italy.

ACADEMIES *of painting, ſculpture*, and *architecture*. There is one of theſe at Paris, and another at Rome.

The academy at Paris conſiſting of the moſt eminent maſters in painting and ſculpture, was founded by M. de Noyers, ſecretary of ſtate to Lewis XIII. This academy at firſt conſiſted of about twenty-five perſons, *viz.* twelve officers called ancients, eleven private members, and two ſyndics. But at preſent it conſiſts of forty painters and ſculptors. There are four perpetual rectors nominated by the king, a director, a chancellor, a ſecretary who keeps the regiſter, and counterſigns the diſpatches; a treaſurer, twelve profeſſors, adjuncts to the rectors and profeſſors, ſix chancellors, a profeſſor for that part of anatomy which relates to painting, and another for perſpective. The academy at Rome was eſtabliſhed by Lewis XIV, and here thoſe who have won the annual prize in the academy at Paris, are received and entertained for three years, and have a penſion from the king, to give them an opportunity of perfecting themſelves. The academy at Paris ſends one of their governors for its preſident.

ACADEMIES *of ſciences*, thoſe chiefly deſigned

BRITISH MUSEUM

Fig. 1. ACAJOU, the *CASHEW-NUT.*

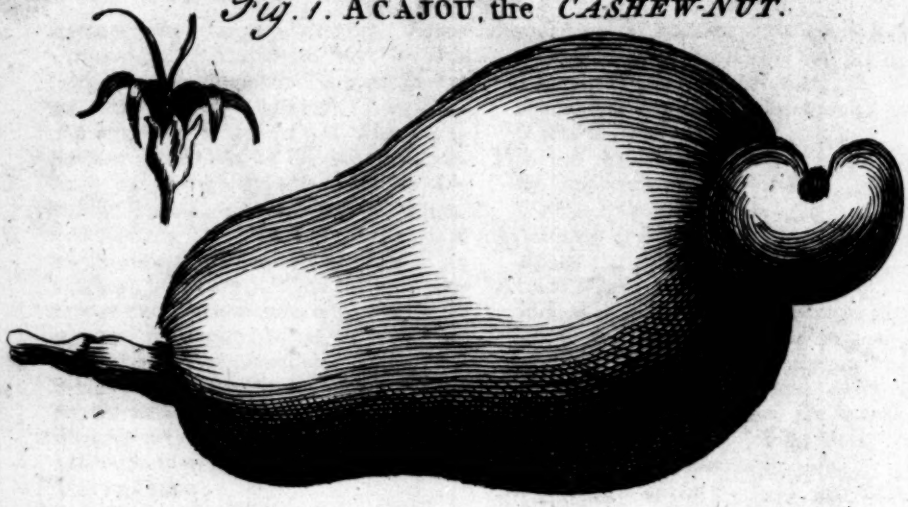


Fig. 2. ACANTHUS, or *BEAR'S BREECH.*

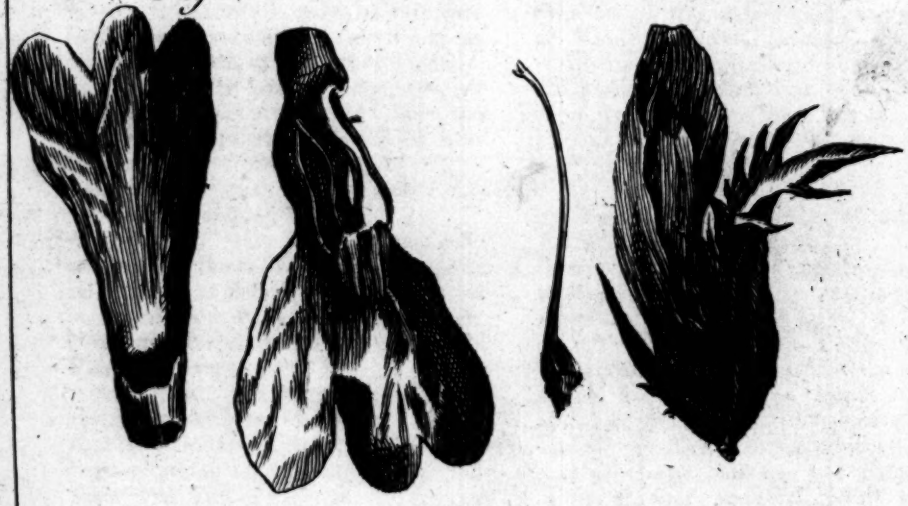
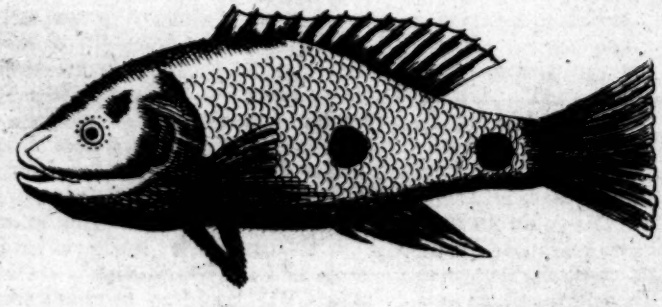


Fig. 3. ACARA.



T. Jefferys sculp.

ſigned for the improvement of natural hiſtory and mathematics, with their numerous branches, botany, chemiſtry, mechanics, aſtronomy, geography, &c.

Theſe are the moſt numerous of all others, but the moſt noted ones are thoſe at London, Paris, Berlin, Peterſburg, Bologna. That of London is called the Royal Society; and indeed with us, Society is the general term for all eſtabliſhments of this kind, as academy with foreigners. See the article SOCIETY.

ACADEMY is alſo more particularly uſed with us for a kind of ſchools, where youth are inſtructed in various branches of learning. Of this kind, we have two royal ones, *viz.* one at Portſmouth, for teaching navigation, drawing, &c. which may be called a naval or maritime academy; and another at Woolwich, where youth are taught fortification, gunnery, &c. which may be ſtiled the military academy. Beſides theſe, there are numerous academies, eſpecially in London, for teaching mathematics, languages, writing, accounts, drawing, and other branches of learning. The diſſenters have likewiſe their academies for teaching philoſophy, divinity, &c. which give great umbrage to the ſticklers for epiſcopacy.

ACADEMY is alſo a name peculiarly given to a riding-ſchool, otherwiſe called the manege. See MANEGE.

ACADEMY *Figures*, in painting, a draught, or deſign, made after a model, with a crayon or pencil.

ACADIE, or ACADY, in geography, a name formerly given to Nova Scotia, or New Scotland, one of our American colonies. See *New* SCOTLAND.

ACÆNA, in grecian antiquity, a meaſure of length, containing ten of their feet. See MEASURE and FOOT.

ACAJOU, the CASHEW-NUT-TREE, in botany, the name of a ſpecies of anacardium. See ANACARDIUM.

The flower of the acajou conſiſts of one funnel-faſhioned leaf, divided into many ſegments at the edges: the piſtil, which is ſurrounded with a number of ſtamina, finally becomes a ſoft turbinated fruit, with a kidney-ſhaped capſule affixed to it, in which is contained a ſeed of the ſame ſhape. See plate III. fig. 1.

The acajou is a native of Braſil, of the fruit of which the Indians make a kind of vinous intoxicating liquor. The kernel of the caſhew-nut may be eaten, when roaſted, but its huſk is extremely acrimonious. The dyers make uſe of the oil drawn from it, in dying black.

ACALYPHA, in botany, a genus of the *monoecia polyandria* claſs of plants; the calyx of the male flowers conſiſts of four ſmall, roundiſh, concave, and equal petals; there is no corolla; in the female flower the calyx is compoſed of three leaves, and there is no corolla; the fruit is a roundiſh, triſulcated, trilocular capſule, with a large, ſingle, roundiſh ſeed in each cell.

ACANACEOUS *Plants*, among botaniſts, thoſe which are prickly, and bear their flowers and ſeeds on a kind of heads.

ACANTHA, among botaniſts, a name given to the prickles of thorny plants.

ACANTHA is alſo uſed by zoologiſts for the ſpines of certain fiſhes, as thoſe of the echinus marinus, &c.

ACANTHA is alſo a term uſed by ſome anatomiſts for the protuberances of the back bone, otherwiſe called Spina dorſi. See the article SPINE.

ACANTHABOLUS, in ſurgery, a kind of forceps, or inſtrument for pulling out thorns and other ſharp-pointed bodies, that may have penetrated the ſkin: alſo an inſtrument for pulling hairs from the eye-brows, &c.

ACANTHACEOUS, among botaniſts, an epithet given to all the plants of the thiſtle kind, on account of the prickles with which they are beſet. See the article THISTLE.

ACANTHINE, among the antients, ſomething belonging to, or reſembling the herb acanthus: hence we read of acanthine garments, acanthine woods, &c. The acanthine garments, according to ſome, were made of the down of thiſtles, but others will have them to be only embroidered in imitation of the egyptian acanthus. They will have the acanthine wood to be the ſame with braſil-wood.

ACANTHOPTERYGIOUS *Fiſhes*, *Acanthopterigii piſces*, among zoologiſts, one of the general claſſes or families of fiſhes, diſtinguiſhed by having the rays of their fins bony, and ſome of them prickly at the extremities.

Under this claſs are contained ſeventeen genera, *viz.* The gaſteroſteus, chætodon, zeus, cottus, trigla, ſcorpæna, trachinus, perca, ſciæna, ſparus, labrus, mugil, ſcomber, xiphias, gobius, blennius, and ophidion: for the deſcription of all which, ſee the articles GASTEROSTEUS, CHÆTODON, ZEUS, &c.

ACANTHUS, in botany, a genus of the didynamia

didynamia angioſpermia claſs of plants, the calyx of which is a permanent perianthium: the flower conſiſts of one leaf, the anterior part of which is divided into three ſegments, and the hinder part forms a kind of ring. The piſtil, which riſes from the cup, finally becomes an acorn ſhaped fruit, containing a number of gibboſe-ſeeds. See plate III. fig. 2. The acanthus may be known when not in flower, by its beautiful leaves, which are ſo elegant as to be imitated on carvings.

ACANTHUS, in architecture, an ornament repreſenting the leaves of the herb acanthus, and uſed in the capitals of the corinthian and compoſite orders. See the article CAPITAL.

For this purpoſe, the greek ſculptors imitated the leaves of the ſoft acanthus, as the Goths did thoſe of the prickly kind.

ACAPULCO, in geography, a ſea-port town of North America, in W. longitude 102°. N. latitude 17° 30′. It is ſituated in the province of Mexico, on a fine bay of the South-ſea, from whence a ſhip ſails annually to Manila in the Philippine iſlands.

ACARA, in ichthyology, a ſmall braſilian freſh-water fiſh, ſeldom exceeding three inches in length. It has a high back like the pearch, on which ſtands a long fin reaching nearly to the tail, and ſupported by numerous rigid and prickly rays. Its fins are all brown. But what chiefly diſtinguiſhes it is a large black ſpot on the middle of each ſide, and another near the tail. See plate III. fig. 3.

ACARA-AYA, a braſilian fiſh of the ſhape of our carp: it grows to three feet in length, and has two long teeth in the upper jaw, thoſe in the under one being extremely ſharp, numerous, and even. Its tail is broad, and but very little forked. Its belly is white, as are the belly-fins, the others being pale red. It is eſteemed a delicate fiſh, and eaten ſalted as well as freſh. See plate IV. fig. 1.

ACARA-MUCU, the name of a very remarkable ſmall fiſh, about ten fingers breadth long, and four broad. Its mouth is round, very ſmall, and furniſhed with triangular teeth. On the ridge of the back, juſt behind the eyes, there ſtands a ſlender pointed horn, of a cylindrical ſhape, and four fingers breadth long. It is found on the coaſt of Braſil, has no ſcales, and is not eatable. See plate IV. fig. 2.

ACARA-PEBA, a ſmall Braſilian fiſh, about a foot long, and four or five inches broad. Its mouth is large, but without teeth, and its tail is forked. It has one long back fin, the anterior rays of which are rigid and prickly, but the hinder ones ſoft and flexible. It ſeems to be a variety of ſmaris. See SMARIS.

ACARA-PITAMBA, a beautiful braſilian fiſh, reſembling our mullet, and growing to two feet, or more in length. Its tail terminates in two oblique horns; and along the middle of each ſide, there runs a broad and beautiful gold-coloured line, from the gills to the tail. Its back, down to this line, is variegated alſo with ſpots of the ſame colour; and the ſides under the line, are variegated with ſhort, longitudinal lines, of a ſomewhat paler colour than that of the broad line. Its belly is white and its fins yellow. See plate IV. fig. 4.

ACARAUNA, a ſmall american fiſh, called by our ſailors the old wife, of which there are ſeveral ſpecies. They ſeldom exceed four or five inches in length, and are nearly as broad as long. One has a ſharp thorn, or prickle, on each ſide near the tail; theſe it draws in or thruſts out at pleaſure. Another, which is that called the old wife, has four ſharp thorns on each ſide its upper jaw, and two on each ſide the under one: from theſe laſt, which bend downwards, and in ſhape reſemble a cock's ſpur, there runs up a row of ſmall thorns to the eye. See plate IV. fig. 3.

ACARNAN, a ſmall ſea-fiſh, common in the Mediterranean, and ſuppoſed to be the ſame ſpecies with the rubellio, or erythrinus. See plate V. fig. 1. and the article ERYTHRINUS.

ACARUS, in zoology, a numerous genus of inſects, comprehending the lice of ſeveral animals, and the mites in general. The body of the acarus is ſhort and roundiſh; the eyes are two; and the legs eight in number, each conſiſting of eight joints. The largeſt or longeſt legged acarus is deſcribed in plate V. fig. 2.

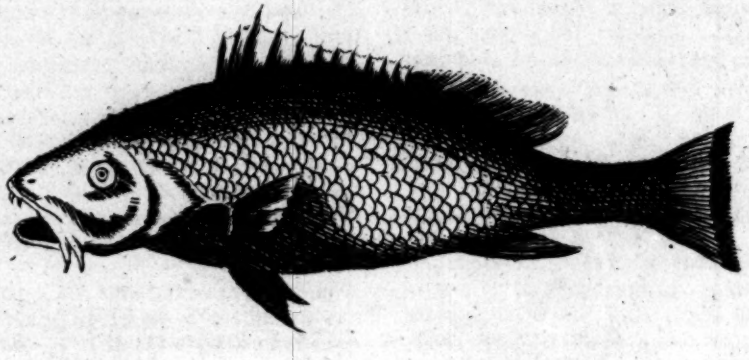
ACATALEPSY, *acatalepſia*, among antient philoſophers, the impoſſibility of comprehending ſomething.

The diſtinguiſhing tenet of the pyrrhonians was, their aſſerting an abſolute acatalepſy in regard to every thing. See the article PYRRHONIANS.

ACATALEPTIC, Ακαταληπτικος, in antient

BRITISH MUSEUM

Fig. 1. ACARA-*AYA*.



ACARA-*MUCU*. *Fig. 2.*

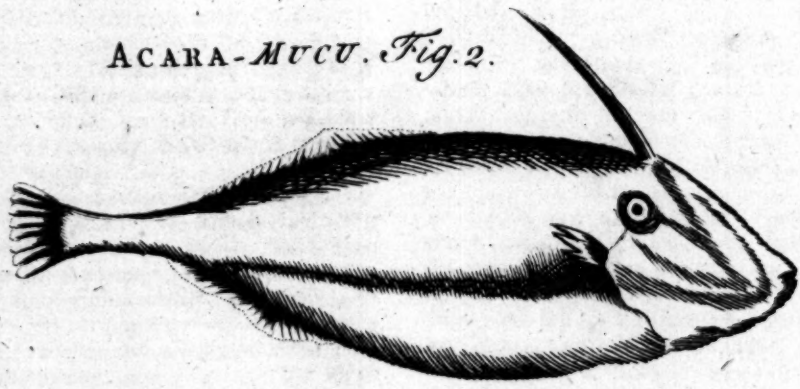
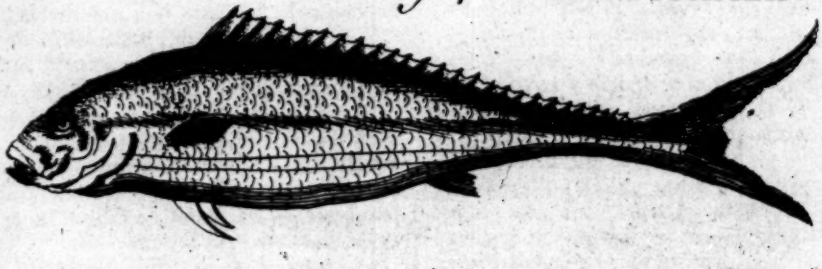


Fig. 3. ACARAUNA.



Fig. 4. ACARA-*PITAMBA*.



T. Jefferys sculp.

ent proſody, an appellation given to ſuch verſes as have all their feet complete, in contradiſtinction to thoſe which want a ſyllable to make up the laſt foot.

ACATERY, or ACCATRY, an officer of the king's houſhold, deſigned to be a check between the clerks of the kitchen and the purveyors.

ACATIUM, in antiquity, a kind of boat or pinnace uſed in military affairs.

The acatium was a ſpecies of the *naves actuariæ*. See ACTUARIÆ *naves*.

ACAULOSE, or ACAULOUS, among botaniſts, a term uſed for ſuch plants as have no *caulis*, or ſtem. See CAULIS.

ACCALIA, in roman antiquity, ſolemn feſtivals held in honour of Acca Laurentia, Romulus's nurſe: they were otherwiſe called *Laurentalia*.

ACCAPITARE, in our old law books, the act of becoming a vaſſal, or paying homage to ſome lord. Hence,

ACCAPITUM, ſignified the money paid by a vaſſal, upon ſuch an occaſion.

It is likewiſe uſed for the relief due to the chief lord. See RELIEF.

ACCEDAS *ad curiam*, in law, a writ lying where a man hath received, or fears falſe judgment in a hundred-court, or court-baron. It is iſſued out of the Chancery, and directed to the ſheriff, but returnable in the King's-bench or Common-pleas. It lies alſo for juſtice delayed, and is ſaid to be a ſpecies of the writ *Recordare*. See RECORDARE.

ACCELERATED MOTION, in mechanics, is a motion which receives continual increments, or acceſſions of velocity. See the article MOTION.

The accelerated motion of falling bodies is produced by the impulſe of gravity, which keeps continually acting upon them, and thereby communicating a new augmentation of motion every inſtant. If this increaſe be equal in equal times, the motion is ſaid to be uniformly accelerated. See ACCELERATION.

ACCELERATED MOTION of bodies on inclined planes. See INCLINED PLANE.

ACCELERATED MOTION of projectiles. See the article PROJECTILES.

ACCELERATING FORCE, being a ſort of centripetal force, is expreſſed by that velocity, generated in a given time, with which bodies (conſidered as phyſical points) move towards the central body attracting them by its abſolute force. This accelerating force is greater or leſs, according to the diſtance of the center of the force, in a reciprocal duplicate proportion. Thus is the gravity, that makes bodies tend towards the center of the earth, greater in vallies than on the tops of high mountains; greater at the poles than at the equator, which is ſeventeen miles higher; and greater at the equator than at greater diſtances from the center of the earth; for the ſame body, which, near the ſurface of the earth, falls ſixteen feet in the firſt ſecond of its fall, would fall but four in the ſame time, if it began at the height of four thouſand miles from the ſurface of the earth, or two ſemidiameters diſtance from its center. At equal diſtances the accelerating force is the ſame every where, becauſe all bodies, large or ſmall, heavier or lighter, abſtracting from the reſiſtance of the air, are equally accelerated in their fall. See the articles FORCE, CENTRIPETAL FORCE, MOTION, GRAVITATION, ACCELERATION, and DESCENT.

ACCELERATION, in mechanics, denotes the augmentation or increaſe of motion in accelerated bodies. See the laſt article.

The term acceleration is chiefly uſed in ſpeaking of falling bodies, or the tendency of heavy bodies towards the center of the earth produced by the power of gravity; which, acting conſtantly and uniformly upon them, they muſt neceſſarily acquire, every inſtant, a new increaſe of motion.

Thus, in the rectangle A B E D C F, (plate V. fig. 3.) if 1 *a* repreſent the velocity acquired, whilſt a body falls thro' A 1, ſuppoſe one minute; than 2*b* will expreſs the velocity acquired in two minutes repreſented by A 2; 3 *c* the velocity acquired in three minutes, or A 3. and B C the velocity acquired, whilſt the body falls through A B.

Now the triangles A 1 *a*, A 2 *b*, A 3 *c*, and A B C repreſent the ſpaces deſcribed by the falling body in the reſpective times A 1, A 2, A 3, and A B, by reaſon of the uniform action of gravity; but theſe triangles being ſimilar, are to each other as the ſquares of their homologous ſides, A 1, A 2, A 3, A B; that is, the ſpaces are to each other as the ſquares of the times in which they are deſcribed.

Hence alſo follows the great law of acceleration, *viz.* that a falling body, uniformly accelerated, deſcribes, in the whole time of its deſcent, juſt one half of the ſpace it would have deſcribed in the ſame time, with the motion it has acquired at the end of its fall.

From what has been ſaid, it is evident, that the ſpaces deſcribed by a falling body in a ſeries of equal portions of time, will be as the odd numbers 1, 3, 5, 7, &c. See the figure above referred to, where the ſpace deſcribed in the time A 1 is repreſented by the triangle A 1 *a*; whereas the ſpace deſcribed in the ſecond portion of time, contains three ſuch triangles; that deſcribed in the third portion, five ſuch triangles, and ſo on.

Again, that the ſpaces deſcribed by falling bodies in different times, are as the ſquares of the velocity acquired at the end of their fall.

As the ſpaces repreſented by the odd numbers 1, 3, 5, 7, &c. ſtill approach nearer and nearer to an equality, ſo the accelerated motion likewiſe approaches nearer and nearer to an uniform motion; and if the body moves in a reſiſting medium, the motion will actually become uniform, at a certain diſtance.

ACCELERATION of the motion of pendulums. See the article PENDULUM.

ACCELERATION is alſo a term uſed in the writings of antient aſtronomers, where it ſignifies the difference between the revolution of the primum mobile, and that of the ſun, computed to be three minutes and fifty-ſix ſeconds.

ACCELERATOR, in anatomy, the name of two muſcles of the penis, ſo called from their expediting the urine and ſemen.

They likewiſe aſſiſt the erectores in the erection of the penis, by driving the blood contained in the cavernous body of the urethra towards the glans, which is thereby diſtended; the tumefaction of theſe muſcles at the ſame time compreſſing the veins that carry off the refluent blood from the corpus cavernoſum.

ACCENDENTES, or ACCENSORES, in the church of Rome, a lower rank of miniſters, whoſe buſineſs it is to light, ſnuff, and trim the candles and tapers.

ACCENDONES, or ACCEDONES, in roman antiquity, a kind of officers in the gladiatorian ſchools, who excited and animated the combatants during the engagement.

ACCENSI, in Roman antiquity, certain ſupernumerary ſoldiers, deſigned to ſupply the place of thoſe who ſhould be killed, or anywiſe diſabled.

Accenſi alſo denoted a kind of inferior officers, appointed to attend the roman magiſtrates.

ACCENSION, *accenſio*, the act of kindling, or ſetting any body on fire. Thus the accenſion of tinder is effected by ſtriking fire with flint and ſteel: and what is more ſurpriſing, becauſe leſs common, the accenſion of two cold liquors may be effected by only mixing them together.

ACCENT, in a general ſenſe, denotes a certain tone or manner of ſpeaking, peculiar to ſome nation, country, or province: thus we ſay, the ſcotch accent, the iriſh accent, &c.

ACCENT, among grammarians, is the raiſing or lowering of the voice in pronouncing certain ſyllables of words.

We have three kinds of accents, *viz.* the acute, the grave, and circumflex. The acute accent, marked thus (′), ſhews that the voice is to be raiſed in pronouncing the ſyllables over which it is placed. The grave accent is marked thus (‵), and points out when the voice ought to be lowered. The circumflex accent is compounded of the other two and marked thus (ˆ or ^): it denotes a quavering of the voice, between high and low. Some call the long and ſhort quantities of ſyllables, accents; but erroneouſly. See the article QUANTITY.

Accents not only give a pleaſing variety and beauty to the modulation of the voice, but ſerve to aſcertain the true meaning of the word, as in *préſent* and *preſént*.

The Chineſe are extremely remarkable for the uſe they make of accents: thus the word *ya*, according to the place on which they place the accent, ſignifies God, a wall, an elephant, ſtupidity, and a gooſe.

The hebrew likewiſe abounds with accents; there being no leſs than twenty-five tonic accents, ſhewing the proper tone of the ſyllables over or below which they are placed; beſides four euphonic ones, ſerving to render the pronunciation more ſweet and agreeable. However, it is generally allowed, that the accents now in uſe were unknown to the antient Hebrews.

Concerning the antiquity of the greek accents, authors are not agreed; ſome making them of modern date, and others contending for their having been known to the antient Greeks.

ACCENT is alſo uſed for a certain intention or modulation of the voice, to give the ſtronger, or even contrary ſignification to the ſpeaker's words: Thus, we ſay, an angry or diſdainful accent; by the uſe of which, it is eaſy to give an ill meaning to the ſofteſt expreſſions.

In this ſenſe we are to underſtand lord Bacon,

Bacon, where he obſerves, that there are accents of ſentences as well as of words: complaining that the former has been utterly neglected, whilſt grammarians have beſtowed a great deal of idle pains upon the latter. See EMPHASIS.

ACCENT, in muſic, a certain modulation or warbling of the ſounds, to expreſs paſſions, either naturally by the voice, or artificially by inſtruments.

Every bar or meaſure is divided into the accented and unaccented parts; the former being the principal, on which the ſpirit of the muſic depends.

The harmony ought always to be full, and void of diſcords, in the accented part of the meaſure.

ACCENT, in poetry, the ſame with what is otherwiſe called *reſt*. See REST.

ACCENTOR, in muſic, denotes one of the three ſingers in parts, or the perſon who ſings the predominant part in a trio. See the article TRIO.

ACCEPTANCE, in common law, the tacitly agreeing to ſome act before done by another, which might have been defeated without ſuch acceptance. Thus if a huſband and wife, ſeized of land in right of the wife, make a joint leaſe or feoffment, reſerving rent, and the huſband dies; after which the widow receives or accepts the rent: ſuch receipt is deemed an acceptance, confirms the leaſe of feoffment, and bars her from bringing the writ *cui in vita*.

ACCEPTANCE, among civilians, denotes the conſenting to receive ſomething offered to us, which by our refuſal could not have taken effect; or acceptance is the actual concurrence of the will of the donee, without which the donor is at liberty to revoke his gift at pleaſure.

ACCEPTANCE, in the church of Rome, is particularly uſed for the receiving the Pope's conſtitutions.

The acceptance of the conſtitution *unigenitus*, has occaſioned, and ſtill continues to excite a world of confuſion in the popiſh countries, but more eſpecially in France, where many of the clergy refuſe to accept it.

ACCEPTANCE, among merchants, is the ſigning or ſubſcribing a bill of exchange, by which the acceptor obliges himſelf to pay the contents of the bill. See the article BILLS of *Exchange*.

Bills payable at ſight are not accepted, becauſe they muſt either be paid on being preſented, or elſe proteſted for want of payment.

The acceptance of bills payable at a fixed day, at uſance or double uſance, &c. need not be dated: becauſe the time is reckoned from the date of the bill; but it is neceſſary to date the acceptance of bills payable at a certain number of days after ſight, becauſe the time does not begin to run till the next day after that acceptance: This kind of acceptance is made thus, *Accepted ſuch a day and year*, and ſigned.

In general, he to whom a bill of exchange is made payable ought to demand the acceptance of the perſon on whom it is drawn, and that in the full extent of the terms of the bill, and on refuſal of acceptance to return it with proteſt. This he ought to do for his own ſecurity, as well as for that of the drawer. Thus, if the bearer of a bill conſents to an acceptance at twenty days ſight, inſtead of eight days expreſſed in the bill, he runs the riſk of the twelve days prolongation; ſo that he can have no recourſe againſt the drawer, ſhould the acceptor break in that time. Again, if a bill be drawn for three thouſand pounds, and the bearer agrees to take an acceptance for two only, and ſhould receive no more than that ſum, the remaining thouſand would be at the hazard of the bearer, as well as in the former caſe.

If, therefore, a bill be only accepted in part, or for a longer time than that expreſſed in it, the bearer ought to proteſt it, at leaſt for the ſum not accepted.

Again, if the acceptor breaks or refuſes to make payment when the bill becomes due, it is neceſſary to get the bill immediately proteſted by a public notary, to be ſent along with the proteſt, to the remitter, to procure ſatisfaction from the drawer.

By ſtatute, inland-bills of exchange muſt be accepted by ſigning or endorſing in writing, and proteſted for refuſal of ſuch acceptance, otherwiſe the drawer is not liable to coſts; it muſt likewiſe be returned to the drawer within fourteen days. However, ſuch proteſt is not neceſſary unleſs the value be acknowledged in the bill to be received, and unleſs the bill be drawn for 20*l.* or upwards.

A bill drawn on two jointly muſt have a joint acceptance, otherwiſe be proteſted; but if on two or either of them, the acceptance of one is ſufficient.

ACCEPTATION, in grammar, denotes the meaning or ſenſe wherein a word is generally taken. Thus we ſay, ſuch a word has ſeveral acceptations.

ACCEPTATION, in law, the ſame with accept-

acceptance. See ACCEPTANCE.

ACCEPTER, or ACCEPTOR, *of a bill of Exchange*, the perſon who accepts it. See the article ACCEPTANCE.

The acceptor is obliged to pay the contents of the bill, even though the drawer ſhould fail before it becomes due.

ACCEPTILATION, among civilians, ſignifies an acquittance given by a creditor to a debtor, without receiving any money.

ACCEPTION, the ſame with acceptation. See the article ACCEPTATION.

ACCESS, in a general ſenſe, denotes the approach of one thing towards another; but it is more proper to ſay, the approach of bodies, the appulſe of the planets, &c.

ACCESS, in a more limited ſenſe, is uſed for permiſſion or leave to come near any perſon, place, or thing: thus we ſay, it is difficult to get acceſs to ſuch a perſon, or place.

ACCESS, among phyſicians, is uſed for the beginning of a paroxyſm or fit of ſome periodical diſeaſe: thus we ſay, an acceſs of a fit of the ague, an intermitting fever, the gout, &c. See the article PAROXYSM.

ACCESSARY, or ACCESSORY, in law, a perſon who is in any wiſe aiding in the commiſſion of ſome felonious action.

By ſtatute, he who counſels, abets, or conceals the committing of ſuch an action, or the perſon who has committed it, is deemed an acceſſary. There are two kinds of acceſſaries, *viz.* before the fact, and after it. The firſt is he who commands and procures another to commit felony, but is abſent when it is done: for if he be preſent, he is a principal. The acceſſary after the fact is one who receives, comforts, or aſſiſts the felon; knowing him to be ſuch.

In the higheſt crimes, as high treaſon, &c. and the loweſt, as riots, forcible entries, &c. there are no acceſſaries, but all concerned are principals. It is a maxim among lawyers, that where there is no principal, there can be no acceſſary; ſo that it is neceſſary the principal be firſt convicted, before the acceſſaries can be arraigned. However, if the principal cannot be taken, the acceſſary may be proſecuted for a miſdemeanor, and puniſhed by fine, impriſonment, &c.

Acceſſaries in petty treaſon, murder, and felony, are not allowed their clergy. See *Benefit of* CLERGY.

A wife may aſſiſt her huſband, without being deemed acceſſary to his crime; but not *e contra*. A ſervant aſſiſting his maſter to eſcape, is reckoned an acceſſary; alſo furniſhing others with weapons, or lending them money, &c. will make perſons acceſſaries. Perſons buying or receiving ſtolen goods, knowing them to be ſuch, are deemed acceſſaries to the felony. Alſo if the owner of ſtolen goods, after complaint made to a juſtice, take back his goods, and conſent to the eſcape of the felon, he becomes acceſſary after the fact.

ACCESSIBLE, ſomething that may be come at, or approached to; thus, we ſay, ſuch a place is only acceſſible on one ſide, &c.

For the geometrical admeaſurement of acceſſible heights and diſtances. See the articles HEIGHT and DISTANCE.

ACCESSION, a term of various import: thus, among civilians, it is uſed for the property acquired in ſuch things as are connected with, or appendages of other things: among phyſicians, it ſignifies the ſame with what is more uſually called paroxyſm: among politicians, it is uſed for a prince's agreeing to, and becoming a party in a treaty before concluded between other potentates: again, it more particularly denotes a prince's coming to the throne by the death of the preceding king: and laſtly, it is uſed by romaniſts for a peculiar way of electing a pope; which is, when one candidate has got two thirds of the votes, the reſt are inrolled by acceſſion.

ACCESSORY, in law, the ſame with acceſſary. See the article ACCESSARY.

ACCESSORY *nerve*, ACCESSORIUS *Williſii*, or *Par* ACCESSORIUM, a kind of ninth pair of nerves of the neck; which ariſing from the ſpinal marrow in the vertebræ of the neck, enters the cranium by the great foramen in the os occipitis. Here it is joined by the par vagum, and coming out of the cranium again by the ſame aperture, it recedes from the par vagum, and is bent back to the trapezius, a muſcle of the ſhoulder.

ACCESSORY, among painters, an epithet given to ſuch parts of an hiſtory-piece as ſerve chiefly for ornament, and might have been wholly left out: ſuch are vaſes, armour, &c.

ACCIDENCE, in literary hiſtory, the name given to a ſmall book, containing the rudiments of the latin tongue.

ACCIDENT, *accidens*, in a general ſenſe, denotes ſomething that is unuſual, or falls out by chance.

ACCIDENT, among logicians, is uſed in a three-fold ſenſe. 1. Whatever does not

not eſſentially belong to a thing, as the cloaths a man wears, or the money in his pocket. 2. Such properties in any ſubject as are not eſſential to it; thus whiteneſs in paper is an accidental quality. 3. In oppoſition to ſubſtance, all qualities whatever are called accidents, as ſweetneſs, ſoftneſs, &c.

Abſolute ACCIDENT, is uſed by the romiſh church for an accident, which may poſſibly ſubſiſt, at leaſt miraculouſly, without any ſubject; an abſurdity, which has been ſtrenuouſly maintained by many of their caſuiſts, and even ſolemnly decreed by ſome of their councils.

ACCIDENT, in heraldry, an additional note or mark in a coat of arms, which may be either omitted or retained, without altering the eſſence of the armour.

ACCIDENTS, in aſtrology, denote the moſt remarkable occurrences in the courſe of a man's life: ſuch are a remarkable inſtance of good fortune, a ſignal deliverance, a great ſickneſs, &c.

ACCIDENT, among phyſicians, is ſometimes uſed for what is more uſually called ſymptom. See SYMPTOM.

ACCIDENTAL, in a general ſenſe, an appellation given to ſuch things as happen by accident. See ACCIDENT.

ACCIDENTAL *point*, in perſpective, that point in the horizontal line, where all lines parallel among themſelves meet the perſpective plane.

ACCIDENTAL *dignities* and *debilities*, in aſtrology, certain caſual diſpoſitions of the planets, whereby they are ſuppoſed to be either ſtrengthened or weakened.

ACCIPENSER, in ichthyology, a genus of chondropterygious fiſhes, the mouth of which is tubular, and has no teeth; there is only one hole or aperture of the gills on each ſide; and the body is oblong and uſually furniſhed with ſeven fins. See CHONDROPTERYGII.

Of this genus there are only two ſpecies, the ſturgeon and huſo, or iſinglaſs-fiſh. See STURGEON and ISINGLASS.

ACCIPITER, in ornithology, the name of a whole order of birds, the diſtinguiſhing characteriſtic of which is, that they have a hooked, or crooked beak.

This order comprehends three genera, *viz.* the parrot, owl, and hawk-kind. See PARROT, &c.

ACCISMUS, in antiquity, denotes a feigned refuſal of what one earneſtly deſires.

The acciſmus was a piece of political diſſimulation, for which Auguſtus and Tiberius are famed.

ACCISMUS, in rhetoric, is accounted a ſpecies of irony. See IRONY.

ACCLAMATION, *acclamatio*, in roman antiquity, a ſhout raiſed by the people, to teſtify their applauſe, or approbation of their princes, generals, &c.

Such is that of Ovid. Faſt. 1. 613.

Augeat imperium noſtri ducis, augeat annos.

ACCLAMATION is alſo uſed, in a bad ſenſe, for expreſſions of deteſtation, &c. Vid. Suet. Domit. c. 23.

ACCLAMATION, in rhetoric, the ſame with what is otherwiſe called epiphonema. See EPIPHONEMA.

ACCLAMATION *medals*, among antiquaries, thoſe whereon the people are repreſented as expreſſing their joy by acclamation.

ACCLIVIS, in anatomy, the name by which ſome call the obliquus aſcendens. See OBLIQUUS.

ACCLIVITY, a term uſed to denote the aſcent of a hill or riſing ground, as declivity is the deſcent.

Acclivity is ſometimes uſed by writers on fortification, for the talus of the rampart. See TALUS.

ACCOLA, among the Romans, ſignified a perſon who lived near ſome place; in which ſenſe, it differed from incola, the inhabitant of ſuch a place.

ACCOLADE, in antient cuſtoms, the ceremony of conferring knighthood, by the king's laying his arms about the young knight's neck, and embracing him.

ACOLLE'E, in heraldry, a term uſed in different ſenſes: ſometimes two things joined together; at other times, animals with collars, or crowns about their necks, and finally, battons, or ſwords, placed ſaltierwiſe behind the ſhield.

ACCOMMODATION, among divines, is the applying what is ſaid of one perſon or thing, to another: thus, the words of Iſaiah, directed to the Jews of his time, are by St. Paul accommodated to the Jews who were cotemporaries with that apoſtle.

ACCOMMODATION is alſo uſed for an amicable agreement, between two or more contending parties.

ACCOMPANYMENT, in muſic, is uſed for the inſtruments which accompany a voice, to make the muſic more full.

Among the moderns, the accompany-

ment

ment frequently plays a different part or melody, from the ſong it accompanies; but authors are not agreed, whether or no it was ſo among the antients.

ACCOMPANYMENT, in heraldry, denotes any thing added to a ſhield by way of ornament, as the belt, mantling, ſupporters, &c.

Accompanyment is alſo uſed for ſeveral bearings about a principal one, as a ſaltier, bend, feſs, &c.

ACCOMPLICE, in law, a perſon who is privy to, or aiding in the perpetration of ſome crime. See ACCESSARY.

By the law of Scotland, accomplices cannot be proſecuted till the principal offenders are firſt convicted. See the article ART *and* PART.

ACCOMPLISHMENT, in a general ſenſe, denotes the perfecting, or entirely finiſhing and compleating any matter or thing.

ACCOMPLISHMENT is more particularly uſed for the fulfilling of a prophecy; in which ſenſe, we read of a literal accompliſhment, a myſtical accompliſhment, &c. See the article PROPHECY.

ACCOMPLISHMENT is ſtill more particularly uſed for the acquirement of ſome branch of learning, uſeful art, polite exerciſe, &c.

ACCOMPT and ACCOMPTANT. See ACCOUNT and ACCOUNTANT.

ACCORD, in muſic, the ſame with what is more uſually called concord. See CONCORD.

ACCORD, in law, a verbal agreement between two or more, where any one is injured by a treſpaſs, or other offence committed, to make ſatisfaction to the injured party; who, after the accord is performed, will be barred in law from bringing any new action againſt the aggreſſor for the ſame treſpaſs. It is ſafeſt, however, in pleading, to alledge ſatisfaction, and not accord alone; becauſe in this laſt caſe, a preciſe execution in every part thereof muſt be alledged; whereas, in the former, the defendant needs only ſay, that he paid the plaintiff ſuch a ſum in full ſatisfaction of the accord, which he received.

ACCOUNT, or ACCOMPT, in a general ſenſe, is uſed for all arithmetical computations, whether of time, weight, meaſure, money, &c.

ACCOUNT is alſo uſed collectively, for the books in which merchants, traders, and bankers enter all their buſineſs, traffic, and bargains with each other.

The method of keeping theſe is called book-keeping. See BOOK-KEEPING.

To open an ACCOUNT, is to enter in the ledger, the name, the ſurname, and the place of abode of the perſon with whom you have dealings; after which the ſeveral articles are to be poſted or placed either on the credit or debit ſide, according as the perſon is become your creditor or debtor.

To place or poſt a ſum to ACCOUNT, is to enter it into the ledger, either on the debit or credit ſide, according as the perſons are become debtors or creditors.

To examine an ACCOUNT, is to read it exactly, in order to prove the truth of the computation, or detect errors, if there are any.

To ſettle an ACCOUNT, is to ſum up all its articles, both on the debit and credit ſide, and find the balance between them; which being placed on the leaſt ſide, makes the ſum of both equal: this is otherwiſe called *ſhutting*, *balancing*, *cloſing*, or *making up* an account.

ACCOUNT *in Company*, an account kept by traders in partnerſhip, wherein all articles relating to their joint trade are entered.

ACCOUNT is alſo uſed in different ſenſes, as for profit, hazard, &c. thus we ſay a man has found his account in ſomething, or it has turned to good account; alſo, if a man commits errors, they ſhall be on his own account, &c.

ACCOUNT, in law, is a writ or action, which lies againſt a perſon, who, by reaſon of his office or buſineſs, is obliged to render an account to another, but refuſes to do it; as a bailiff, for inſtance, to his lord.

ACCOUNT, in the remembrancer's office in the exchequer, is the ſtate of any branch of the king's revenue; as the account of the mint, of the wardrobe, of the army, of the navy, &c.

Chamber of ACCOUNTS, in the french polity, a ſovereign court, anſwering nearly to our exchequer. See the article EXCHEQUER.

ACCOUNT *of ſales*, among merchants, an account of the diſpoſal and net-proceeds of certain merchandizes, after deducting charges and commiſſion.

Auditing an ACCOUNT, the examining and paſſing it by an officer appointed on purpoſe.

AC-

ACCOUNTABLE, a term uſed to denote a perſon's being liable to be called to account. See the article ACCOUNT.

ACCOUNTANT, or ACCOMPTANT, in a general ſenſe, denotes one whoſe buſineſs it is to keep accounts. See the article ACCOUNT.

The term accountant is applicable, in a more reſtricted ſenſe, to a perſon, or officer, appointed to keep the accounts of a public company or office: thus, we ſay the accountant of the South-Sea, of the India-Company, of the Bank, of the Cuſtom-houſe, of the Exciſe, &c.

ACCOUNTANT-*general*, in the court of Chancery, a new officer appointed by act of parliament to receive all monies lodged in court, and convey the ſame to the bank of England for better ſecurity. The ſalary of this officer and his clerks is to be paid out of the intereſt made of part of the money; it not being allowable to take fees in this office.

ACCOUNTANTSHIP, a term uſed to denote the art of keeping merchant's accounts, more uſually called book-keeping. See the article BOOK-KEEPING.

ACCOUNTING-HOUSE, COUNTING-HOUSE, or COMPTING-HOUSE, a place or office ſet apart by merchants and other traders, in which to keep their books of accounts, and vouchers belonging to them, as well as to tranſact their buſineſs.

ACCOUTREMENT, an old term, ſignifying dreſs, ſtill uſed for the furniture of a ſoldier.

ACCRETION, in natural hiſtory, the increaſe or growth of a body by an external addition of new parts: thus it is, ſalts, ſhells, ſtones, &c. are formed.

ACCRETION, among civilians, a term uſed for the property acquired in a vague or not occupied thing, by its adhering to or following another thing already occupied; thus, if a legacy be left to two perſons, and one of them die before the teſtator, the legacy devolves to the ſurvivor by right of accretion. Alluvion is another inſtance of accretion. See the article ALLUVION.

ACCROCHE', in heraldry, denotes a thing's being hooked into another.

ACCROCHING, in our old law-books, is uſed for incroaching, or uſurping upon another man's right.

ACCRUE, or ACCREW, in law, is ſaid of a thing that is connected as an appendage to ſomething elſe.

ACCUBATION, in antiquity, the poſture uſed among the Greeks and Romans at table: which was with the body extended on a couch, and the head reſting on a pillow, or on the elbow, ſupported by a pillow.

Pitiſcus tells us the manner in which the gueſts were diſpoſed, which was this: a low round table was placed in the dining-room, about which ſtood ſometimes two, but more uſually three beds or couches; from the number whereof the dining-room got the name of *Biclinium* or *Triclinium*. Theſe couches were covered with richer or plainer cloaths, according to the quality of the perſon, and furniſhed with quilts and pillows. Each couch uſually contained three perſons: it being deemed ſordid to crowd more. The firſt lay at the head of the bed, with his legs extended behind the ſecond; who lay in the ſame manner in regard to the third. The middle place paſſed for the moſt honourable. However, before placing themſelves, they always took care to pull off their ſhoes, and put on what was called the *veſtis cœnatoria*.

ACCUMULATION, in a general ſenſe, the act of heaping or amaſſing things together.

ACCUMULATION, among lawyers, denotes the concurrence of ſeveral titles to the ſame thing, or of ſeveral circumſtances or proofs to make out one fact.

ACCUMULATION, among antient gardeners, was the covering the roots of trees by throwing on them the earth which had been dug up in ablaqueation. See the article BARING *of trees*.

ACCUMULATION *of degrees*, in an univerſity, the taking ſeveral of them together, or at ſmaller diſtances from each other than uſual, or than the rules allow of.

ACCURSED, in a general ſenſe, denotes ſomething that is deteſtable, or a perſon abandoned to impiety and wickedneſs. See the article ANATHEMA.

Accurſed is more particularly uſed for an excommunicated perſon. See the article EXCOMMUNICATION.

ACCUSATION, among civilians, the bringing a criminal action againſt any perſon; in which ſenſe, it differs only in circumſtances from what among us is called impeachment. See the article IMPEACHMENT.

Writers on politics treat of the benefit and the inconveniences of public accuſations. Various arguments are alledged, both for the encouragement and the diſencou-

ragement of accuſations againſt great men Nothing, according to Machiavel, tends more to the preſervation of a ſtate, than frequent accuſations of perſons truſted with the adminiſtration of public affairs. This, accordingly, was ſtrictly obſerved by the Romans, in the inſtances of Camillus, accuſed of corruption by Manlius Capitolinus, &c. Accuſations, however, in the judgment of the ſame author, are not more beneficial than calumnies are pernicious; which is alſo confirmed by the practice of the Romans. Manlius not being able to make good his charge againſt Camillus, was caſt into priſon.

ACCUSATIVE, among latin grammarians, the fourth caſe, which is always governed by an active verb or preposition, expreſſed or underſtood: thus, *amo deum*, I love God; *eo Londinum*, i. e. *eo ad, vel verſus Londinum*, I am going to London, or I am on my way to London.

ACE, among gameſters, a card or die marked only with one point.

ACEPHALOUS, in a general ſenſe, denotes ſomething without a head: thus we read of many fabulous ſtories, in antient geographers, as well as in ſome modern voyages, of nations without heads, whoſe eyes, mouth, &c. were placed in their breaſts or ſhoulders.

But now unaccountable ſoever it may be to repreſent whole nations as acephalous, nothing is more certain, than that there are many inſtances of acephalous births, or children born without heads.

ACEPHALOUS; in our old law-books, an an appellation given to ſuch poor perſons as held nothing of any ſuperior.

ACEPHALUS, any verſe which is defective in the beginning.

ACER, the maple-tree, in botany. See the article MAPLE.

ACERB, a taſte partaking of a great deal of ſourneſs, joined to a certain degree of roughneſs and aſtringency; ſuch is that of unripe fruits.

ACERENZA, or CIRENZA, a town of the kingdom of Naples, ſituated at the foot of the Apennine: It is the capital of the province Baſilicato. E. longitude 16° 45′ N. latitude 40° 40′,

ACERNO, or ACIERNO, a town of the kingdom of Naples, about thirty miles S. E. of Naples. E. longitude 15° 40′ N. latitude 40° 50′

ACERRA, in antiquity, a kind of altar erected near the bed of a dead perſon, on which incenſe and other perfumes were burnt till the time of the burial. See the article BURIAL.

ACERRÆ alſo denoted the pots wherein the incenſe was burnt: hence we read of *plena acerra*, a full acerra.

ACERRA, in geography, a city of the K. of Naples in the province of Lavoro, about eight miles N. of Naples. It is a biſhop's ſee.

ACETABULUM, in antiquity, a kind of plate wherein ſauce was ſerved to table, and not unlike our ſalts or vinegar cruets.

Acetabulum was alſo a Roman meaſure, uſed as well for dry things as liquids; and equal to a cyathus and an half. See the articles MEASURE and CYATHUS.

ACETABULUM, in anatomy, a hollow cavity in the heads of certain bones ſerving to receive the protuberant heads of others, and thereby forming the articulation called enarthroſis.

The acetabulum is lined with a cartilage, the circular margin of which is called *ſupercilium*.

ACETABULUM, in botany, a genus of ſea-plants, the leaves of which are ſhaped like a baſon. See plate V. fig. 4.

Some will have the acetabulum to be of animal origin, and produced by ſea inſects.

ACETARY, a term uſed by Grew for a certain part in the ſtructure of ſome fruits, ſo called on account of its ſourneſs.

ACETOSA, SORREL, in botany. See the article SORREL.

ACETOSE, or ACETOUS, an epithet uſed for ſuch things as partake ſomething of the nature of vinegar: hence we ſay, an acetous taſte, acetous quality, &c.

ACH, or ACHE, in medicine, denotes a ſevere pain in any part of the body.

Head-ACH, *Tooth*-ACH, See HEAD-ACH. TOOTH-ACH.

ACHAM, ACHAN, or ACHEM, in geography, a large city, which is the capital of a kingdom of the ſame name, in the iſland of Sumatra.

ACHANE, in perſian antiquity, a corn-meaſure equal to forty-five attic medimni. See the article MEDIMNUS.

ACHAT, in law-books, denotes a contract, or bargain, eſpecially in the way of purchaſe.

ACHATES, the *Agat*, in natural hiſtory. See the article AGAT.

ACHERNER, in aſtronomy, a ſtar of the firſt magnitude, in the ſouthern extremity

remity of the conſtellation eridanus. See the article ERIDANUS.

ACHILLEA, in the linnæan ſyſtem of botany, a genus of the ſyngeneſia polygamia ſuperflua claſs of plants, the common calyx of which is ovated, and imbricated with oval acute connivent ſquamæ: the compound flower is radiated; the hermaphrodite florets are numerous and tubulous; the female florets are ligulated; and the proper hermaphrodite ones funnel-ſhaped: there is no pericarpium, and the ſeed is ſingle, oval, and naked.

ACHILLEA is alſo a name often given by the antients to the gum, called in the ſhops dragon's blood. See the article DRAGON'S BLOOD.

ACHILLEID, ACHILLEIS, in literary hiſtory, a celebrated poem of the epic kind, compoſed by Statius in honour of Achilles: It takes in only the infancy of that hero, the poet being prevented by death from deſcribing all his actions, as he intended to have done.

ACHILLES, an appellation, ſometimes given to the principal argument, made uſe of by each ſect of antient philoſophers, in defence of their ſyſtem. It has got this name, in alluſion to the ſtrength of Achilles.

Achilles is particularly uſed for Zeno's argument againſt motion, which conſiſted in making a compariſon between the ſwiftneſs of Achilles, and the ſlowneſs of a tortoiſe; from whence he inferred, that a ſlow body, if but ever ſo ſmall a a diſtance before a ſwift one, could never be overtaken by it.

Tendon of ACHILLES. See the article TENDON.

ACHIOTTE, a drug brought from America, and uſed in dying, as well as in preparing chocolate.

It is the produce of a ſpecies of mitella, a tree which has no leaves, but inſtead thereof a kind of filaments like thoſe of ſaffron, only larger. Between theſe, are found ſmall grains of a vermillion-colour, about the ſize of pepper-corns: theſe the Indians bake in cakes to be ſent into Europe.

Achiotte, beſides the above-mentioned uſes, is eſteemed a powerful cordial, as well as a preſervative for the retention of urine.

ACHLIS, the ſame with machlis. See the article MACHLIS.

ACHLYS, in medicine, denotes a dimneſs of ſight, ariſing from a ſmall cloud, or ſcar, remaining after a ſuperficial ulcer of the cornea.

ACHOR, in medicine, a kind of running ulcer on the face, chiefly infeſting children, but ſometimes alſo grown perſons. A child's face is not unfrequently broken by theſe achores into a number of ſmall holes, which diſcharge a moderately viſcid humour. It is dangerous to repel or drive the humour inwards; a fever or epilepſy being often the conſequence.

ACHRAS, the WILD PEAR-TREE, in botany, a genus of plants, the characters of which are not perfectly known: the flower conſiſts of five erect petals, of a cordated ſhape; and the fruit is an oval berry divided into five cells. The fruit of the achras is more drying, aſtringent, and ſour, than common pears.

ACHRONICAL, ACHRONYCAL, or ACRONYCHAL, in aſtronomy. See the article ACRONYCHAL.

ACHYRANTHES, or ACHYRACANTHA, in botany, a genus of the *pentandria monogynia* claſs of plants, having no corolla; the calyx is a perianthium, compoſed of five lanceolated, acute, rigid, pungent, and permanent dry leaves; there is no pericarpium; the ſeed is ſingle, roundiſh, and compreſſed.

ACICULÆ, in natural hiſtory, certain ſmall ſpikes, or prickles, in form of needles, wherewith nature has armed ſeveral animals, as the hedge-hog, *echinus marinus*, *&c.*

ACID, in a general ſenſe, denotes ſuch things as affect the palate with a ſour, ſharp, and tart taſte.

This property of bodies is generally attributed to a particular claſs of ſalts, called acid ſalts; ſuppoſed to be ſolid ſpiculæ, ſharp-pointed at both ends. Their ſolidity is inferred from their diſſolving the hardeſt bodies, their ſharpneſs from their pungency on the tongue; and their being pointed at both ends, from their penetrating the hardeſt ſubſtances with eaſe.

The great characteriſtic of acid bodies, is, that they make a violent effervescence when mixed with alkaline ſubſtances, and turn a blue tincture of violets red; whereas alkaline ſubſtances, mixed with the ſame tincture, turn it green.

Acid and alkali have been conſidered by ſome chemiſts, as the two athletæ of nature, the great inſtruments whereby all things were effected; and the cauſe not only of natural, but preternatural things, as diſeaſes and cures.

This hypotheſis, we chiefly owe to Tachenius, a German apothecary and chemiſt, and a follower of Helmont's ſyſtem; who publiſhed two books, to ſhew that all natural things are compoſed of alkali and acid. The acid, which he held was generated in the air, from the ſun, and contained in it the hidden ſeeds, or ſouls of all things, aſſociated the alkali to itſelf; and from hence, as a paſſive ſubject, aroſe the eſſe or forms of things. All this he pretended to prove by the authority of Hippocrates. He was followed by Swalve, and his doctrine has been ſince defended by others; but combated and refuted by Bohnius, Boyle, Bertrand, Pitcairn, Hoffman, *&c.*

Some have pretended to mend the hypotheſis of acid and alkali, by altering it into acid and viſcid; which they will have to be the cauſes of all diſeaſes, and fluid alkali the inſtrument of all cures. This doctrine is aſſerted by Bontekoe and Blanchard, but refuted by Hoffman. See the article ALKALI.

The chemiſts call all ſubſtances acids which make an effervеſcence with an alkali. However, this does not ſeem to be a true characteriſtic of acids, becauſe ſome acids will cauſe an effervеſcence, upon being mixed with acids of a different kind; and alkaline ſubſtances will do the ſame with alkalies; and acids with bodies which are neither alkaline nor acid, but neutral.

Acids ſeem to be of the greateſt uſe in the oeconomy of the world, becauſe they are ſo univerſal. In the bowels of the earth we meet with them in almoſt every mine and mineral; but principally in thoſe prodigious rocks of ſalt, which are found in almoſt every country, and which the induſtry of a great many ages have not been able to exhauſt. Such are thoſe in the famous ſalt-mines in Poland, and our own in Cheſhire, where vaſt quantities are got every year, and exported. Not to mention the quantities of acids hourly diſcharged from the bowels of the earth, in the ſalt which may be found, by a nice examination, in the waters of every ſpring, the freſheſt not excepted.

In the air the acid is univerſal, and that in every part of it.

It is remarkable that the acid abounds more in the air, when the winds blow from the eaſt and north, and when the weather is ſerene. This the learned Hoffman informs us is confirmed by the obſervations of thoſe who are concerned in nitre-works, who remark, that, during theſe winds, their alkaline earth is impregnated with an acid. Now as theſe winds are remarkably cold, and as acid ſpirits, particularly that of nitre, increaſe the coldneſs of ice to a prodigious degree, there ſeems reaſon to believe, that the aerial acid is more concerned in the production of of cold in the air than is generally imagined. The analogy between acids and cold, and alcalies and heat is very remarkable.

The principal acids are vinegar and its ſpirits; the juices of lemons, oranges, ſorrel, citrons, *&c.* alſo the ſpirits of nitre, alum, vitriol, ſulphur, and ſea-ſalt.

ACID *menſtruums.* Vegetable acids will intimately diſſolve many vegetable, mineral, and even metallic bodies: thus, horn, bone, ſhell, and the fleſh of animals, are thereby reduced into a tranſparent liquor. See the articles MENSTRUUM, DISSOLVENT, and SOLUTION.

They likewiſe act upon all the metals, except gold, ſilver, and quick-ſilver. Foſſile acids are ſtill more powerful, diſſolving the hardeſt and pureſt metals, which the vegetable ones will not touch: theſe are ſo ſtrong, as generally to deſtroy or prove poiſonous to animals. Thus, if nitre be ground with an equal quantity of colcothar of vitriol, or burnt alum, and then diſtilled in a ſtrong fire, it will afford a good ſpirit of nitre, called by the refiners *aqua fortis*, which diſſolves ſilver into extremely bitter, and cauſtic cryſtals. Spirit of ſea-ſalt is a ſolvent for gold, which no other acid in nature will touch. See AQUA-FORTIS and AQUA-REGIA.

Chemiſts obſerve, that the ſtrongeſt acid menſtruum, by diſſolving its proper ſubject, is changed into an inſipid, unactive matter, no longer retaining the diſſolving power it had before. Hence, it is not improbable, that theſe acids are generated and deſtroyed: for no ſpirit of nitre hath ever been found native, but is always produced from nitre already formed. Therefore theſe acids in diſſolving bodies, concrete therewith, and are changed into new ſubſtances.

General properties of ACIDS. All acids agree, 1. In uniting with alkaline ſubſtances, making effervеſcences with them, and producing new kinds of ſalts. 2. They alſo agree, in combining with chalk, coral, crabs-eyes, pearl, ſhells, horn, bone, quick-lime, iron, copper, *&c.* all which are diſſolved quicker or ſlower by every acid. Now theſe ſolutions, except the metallic ones, loſe all the acrimony of the diſſolving acid: thus, for inſtance, if

ſpirit

ſpirit of nitre be perfectly ſaturated with crabs eyes, this ſolution will prove a limpid, and almoſt inſipid liquor; and when diluted with fair water filtered and kept for ſome time in a gentle heat, it might paſs for pure water; but upon adding fixed alkali thereto, the crabs eyes before diſſolved will ſoon fall to the bottom, and ſhew that the ſolution was not pure water. Hence, therefore, we may eaſily be impoſed upon in the judgment we form of water by taking that for pure element, which contains numerous diſſolved and diſſolving particles. 3. Acids alſo agree in not only concreting with the ſubjects they diſſolve, but likewiſe in thereby loſing their diſſolving power. 4. It is alſo a property of all acids, to change the colour of vegetable juices into red, as we ſee in the juice of violets, roſes, turnſol, *&c.* 5. They all agree likewiſe in this, that they do not ſo much change the bodies they diſſolve, as they are changed by them: thus, vinegar remains no longer vinegar in the lead it has diſſolved, nor can be ſeparated from it again; whereas the lead may be again recovered, and ſo in other inſtances. 6. All acids may be diluted with water, and united with ſpirits and oils: thus, ſpirit of nitre unites with alcohol, though not without conceiving great heat, diſcharging red fumes, and making a ſtrong and almoſt fiery effervescence. The ſame ſpirit of nitre, upon uniting with oils, generally raiſes a violent heat, and ſometimes a motion productive of fire and flame. By mixing acids with oils, a bituminous, pitchy, or ſulphureous matter is commonly produced.

Their differences. Acids differ conſiderably from one another. 1. In regard to ſtrength, or the quantity of true acid with reſpect to the water they contain: thus, according to Homberg, an ounce of the beſt vinegar holds but 18 grains of true acid, the reſt being water; an ounce of ſpirit of ſalt, 73 grains of true acid; an ounce of ſpirit of nitre, 2 drams and 23 grains of true acid; and an ounce of oil of vitriol, 4 drams and 65 grains. 2. In regard to their ſolvent power. Thus, ſpirit of nitre ſcarce touches gold, with a boiling heat, or at moſt renders it black; but preſently diſſolves ſilver: whilſt *aqua regia* has the contrary effect. 3. In being differently affected by the bodies they diſſolve: thus ſpirit of vinegar, by diſſolving lead, becomes thick and unctuous; which is not the caſe with ſpirit of nitre. 4. One and the ſame acid is variouſly changed by acting upon different bodies: thus ſpirit of vinegar may be recovered after diſſolving lead, but is irretrievably loſt by diſſolving iron.

Inflammability and explosive power of ACIDS. Not only are pure acids readily ſet on fire, and even their minute particles diſperſed in the interſtices of other bodies; but, what is more remarkable, if the acid ſpirit of nitre be mixed with an equal quantity of any of the aromatic oils, as that of cloves, ſaſſafras, turpentine, *&c.* it inſtantly burſts into a lucid flame with an exceſſive ebullition and exploſion.

ACIDS, in medicine. Not long ago, it was faſhionable among phyſicians to explain the nature of diſeaſes by the doctrine of acids and alkalies; a cuſtom, which, however fallen into diſrepute, is ſtill followed by ſome, and that with reaſon in regard to particular diſorders. Thus, the heart-burn, chloroſis, and other ſtomachic diſorders may be accounted for from a prevailing acid humour, which is corrected by an animal diet, and the uſe of ſuch vegetables as contain an aromatic oil. Abſorbents, volatile-ſalts, and broths prepared from the fleſh of young healthy animals, are likewiſe recommended. See CARDIALGIA and CHLOROSIS.

ACIDS, in the materia medica, denote ſuch medicines as are poſſeſſed of an acid quality; ſuch are vinegar, ſpirit of vitriol, *&c.*

Theſe being powerful antiſeptics, are eſteemed good in all putrid and malignant diſeaſes, and by their cooling virtue are no leſs efficacious in inflammatory and feveriſh caſes. However, great care ought to be taken not to adminiſter them in ſuch large quantities, as to corrode the bowels, or coagulate the blood.

Acids are alſo commended in the plague, and as ſtyptics. Thus, vinegar not only ſerves to ſtop hæmorrhages, but being ſprinkled upon a red-hot tile or iron, corrects the putrefaction of the air. See the article PLAGUE, *&c.*

ACIDITY, *aciditas*, that quality in bodies which renders them acid. See ACID.

ACIDULÆ, in natural hiſtory and medicine, a term uſed for the cold mineral waters, or ſuch as are impregnated with ſome acid mineral, as alum, vitriol, nitre, *&c.* See the article MINERAL WATER. This opinion took its riſe, no doubt, from the taſte of theſe waters, which is ſharp,

ſharp, briſk, and pungent, whilſt they are freſh. The ſuppoſition too, that there is an univerſal acid contained in the earth, ſerves to eſtabliſh it.

ACIDULATED, among phyſicians, an appellation given to ſuch medicines, as have been mixed with ſome acid. See the article ACID.

ACINACES, in antiquity, a kind of cutlas, or ſcimetar, in uſe among the Perſians.

ACINI, among botaniſts. See ACINUS.

ACINIFORMIS *tunica*, in anatomy, the ſame with uvea. See the article UVEA.

ACINUS, in botany, a name given to grapes or berries growing in cluſters, in oppoſition to baccæ, or ſuch berries as grow ſingle.

ACKNOWLEDGEMENT, in a general ſenſe, is the owning or confeſſing ſomething; but, more particularly denotes the reward of ſome ſervice, or the grateful requital of a favour received.

ACKNOWLEDGEMENT-*money*, a certain ſum paid by tenants in ſeveral parts of England, on the death of their land-lords, as an acknowledgement of their new lords.

ACLIDES, in roman antiquity, a kind of miſſive weapon, with a thong fixed to it, whereby it might be drawn back again. Moſt authors deſcribe the aclides, as a ſort of dart or javelin; but Scaliger makes it roundiſh, or globular, with a wooden ſtem to poiſe it by.

ACME, in a general ſenſe, denotes the height, point, or top of any thing. Among phyſicians, it is uſed for the higheſt pitch to which a diſtemper riſes. It alſo denotes the prime or beſt part of a thing.

ACOEMETI, ακοιμηθοι, in church hiſtory, a kind of antient monks, who performed divine worſhip night and day in their churches. The religious of the holy ſacrament among the papiſts, are ſtill acoemeti.

ACOLUTHI, or ACOLYTHI, in church hiſtory, denotes candidates for the miniſtry, ſo called from their continually attending the biſhop.

ACOLUTHI is alſo uſed for the body-guards, who attended the emperors of Conſtantinople.

ACOLUTHI, ακολουθοι, is alſo an appellation given to the ſtoics, on account of their ſteady adherence to what they had once reſolved.

ACOMAC, a county of Virginia, being a kind of peninſula, formed by the Atlantic ocean, and the bay of Cheſepeack.

ACONE, in natural hiſtory, a kind of whetſtone, otherwiſe called coticula. See the article COTICULA.

ACONITE, *aconitum*, in botany, the name of a genus of plants, called in engliſh wolfſbane, or monkſhood. This genus, according to the Linnæan ſyſtem of botany, is of the polyandria trigynia claſs, having no calyx. Its flower is of the polypetalous, anomalous kind; being compoſed of five irregular leaves, reſembling in ſome meaſure a man's head with a helmet or hood on it. The upper petal repreſents the hood or helmet; the two lower ones ſtand for that part which covers the lower jaw; and the two wings ſeem adapted for covering the temples. From the center of the flower, there ariſe two piſtils, reſembling feet, and received into the hollow of the upper petal, or hood; as is alſo another piſtil, which finally becomes a fruit, compoſed of ſeveral membranaceous vaginæ collected into a head, and uſually containing angular and wrinkled ſeeds. See plate V. fig. 5.

All the ſpecies of aconite are extremely acrimonious, thereby occaſioning mortal convulſions, or inflammations that end in a mortification.

ACONITUM, ACONITE, in botany. See the article ACONITE.

ACONTIAS, in zoology, a ſpecies of ſerpent, otherwiſe called *jaculum*, or the dart-ſnake, from its vibrating its body in the manner of a dart. It is about nine or ten inches long, and of the thickneſs of a man's little finger. On the back it is of a milky grey colour, variegated with ſmall black ſpots, ſurrounded with a white circle, like ſo many eyes.

The neck is wholly black: and from it there run two milk-white ſtreaks along the back to the tail. The belly is perfectly white. It is found in Egypt, and in the iſlands of the Mediterranean.

ACONTIAS is alſo uſed by naturaliſts for a kind of comet, or rather meteor, with a roundiſh or oblong head, and a long ſlender tail reſembling a javelin; from whence it takes its name.

ACONTUM, ακοντιον, in grecian antiquity, a kind of dart or javelin, reſembling the roman pilum.

ACORN, the fruit of the oak. See the article OAK.

Acorns are ſaid to have been the primitive

Fig. 1. ACARNAN.

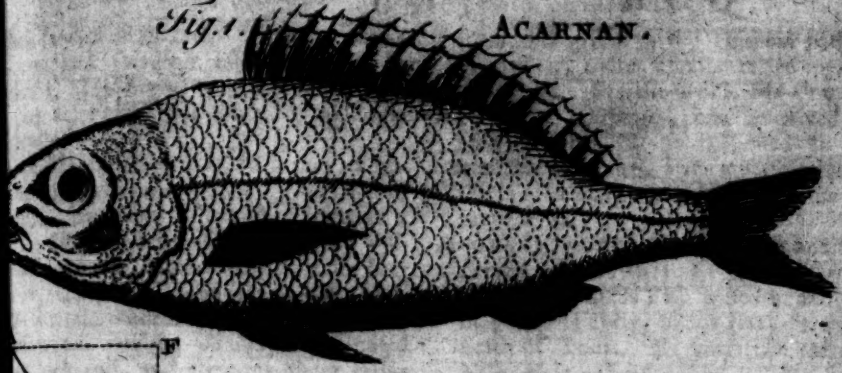




Fig. 3.
ACCELERATION.

Fig. 2.
ACARUS.



Fig. 4.
ACETABULUM.

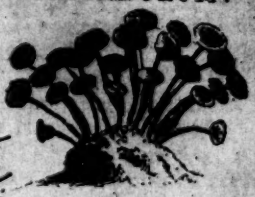


Fig. 5. ACONITE, or *WOLFS-BANE.*

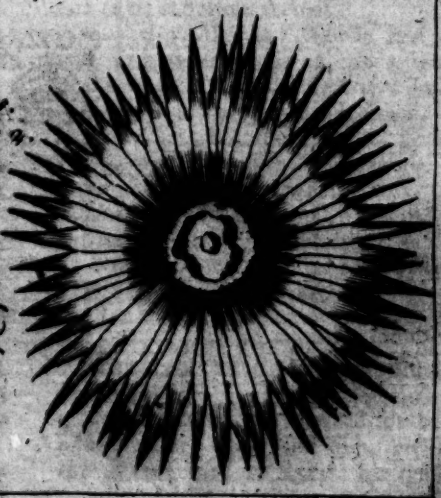


Fig. 6. ACTINIA,
naked Sea Insect with numerous Rays.

Species 1.



Species 2.



T. Jefferys sculp.

BRITISH MUSEUM

tive food of mankind. They are aſtringent, and therefore eſteemed good in fluxes. However, they are principally uſed at preſent, for fattening of hogs, poultry, &c.

CORUS, *the ſweet flag*, in botany, a genus of the hexandria monogynia claſs of plants, the calyx of which conſiſts of a very ſimple cylindric ſpadix, covered with floſcules; the corolla conſiſts of ſix hollow, lax petals, broadeſt at top, and, as it were, truncated; the fruit is a ſhort triangular capſule, obtuſely acuminated at each end, and contains three cells; the ſeeds are of an oblong and oval figure. The root of this plant is ſaid to be a diuretic and attenuant, and is recommended in obſtructions of the viſcera: it is at preſent, however, uſed as a cordial, ſtomachic and carminative; for opening obſtructions of the ſpleen and uterus, and promoting the menſes.

COUSMATICI, ἀκουσματικοὶ, in grecian antiquity, ſuch diſciples of Pythagoras, as had not finiſhed their five years probation. See PYTHAGOREANS.

The acouſmatici were inſtructed by bare poſitive precepts and rules, without reaſons or demonſtrations; theſe precepts they called acouſmata, which were divided into three kinds. The firſt, ſuch as aſſerted what ſomething is; *e. gr.* what is the ſun, the moon, the tetractys, or the like. The ſecond, ſuch as told what is moſt ſuch a thing; *e. gr.* what is moſt juſt? to ſacrifice: what is the moſt powerful? reaſon: what is the trueſt? that men are wicked. The third preſcribed what is to be done, and what not; *e. gr.* that we ought to beget children; that we are to put off the right ſhoe firſt: that we ought not to go in the common road, &c. Such were the pythagorean acouſmata; and thoſe among his diſciples who retained the greateſt fund of theſe, were eſteemed the wiſeſt men.

Some have denied the appellation of pythagoreans to be due to the acouſmatici, in regard many of theſe had their learning not immediately from Pythagoras, but from Hippaſus, who, according to ſome, was of Crotona, but according to others, of Metapontium.

COUSTICS, ἀκουστικὰ, denote the ſcience of hearing, or of ſounds in general, otherwiſe called phonics. See PHONICS.

COUSTICS are alſo uſed, by phyſicians, for ſuch medicines as are good in caſes of deafneſs. See the article DEAFNESS.

COUSTIC *duct*, in anatomy, a name ſometimes given to the external paſſage of the ear, more uſually called meatus auditorius. See the article MEATUS.

ACOUSTIC *inſtrument*, one contrived to aſſiſt hearing. It is faſhioned in the manner of a horn, with a perforation in the ſmaller end, which is fitted to be put into the ear.

ACOUSTIC *nerves*, the ſame with auditory nerves. See AUDITORY NERVES.

ACQUAPENDENTE, a town and biſhop's ſee of Italy, about forty-ſix miles north of Rome. E. longitude 12° 40′. N. latitude 42° 40′.

ACQUEST, or ACQUIST, in law, denotes goods not deſcended by inheritance, but acquired by purchaſe or donation.

Acqueſt is alſo popularly uſed for conqueſt, or lands acquired by the ſword.

ACQUI, a town of Italy in the dutchy of Montſerrat. It is a biſhop's ſee, and ſituated upon the river Bormio. E. longitude 8° 40′ N. latitude 44° 45′.

ACQUIETANDIS *plegiis*, in law, a writ which lies for a ſurety againſt a creditor, who refuſes to acquit him after the debt is paid.

ACQUIETARE, in old law books, ſignifies to diſcharge or pay the debts of a perſon deceaſed, as the heir to thoſe of his father.

ACQUISITION, in a general ſenſe, denotes the obtaining or procuring ſomething. Among lawyers, it is uſed for the right or title to the enjoyment and property of an eſtate got by purchaſe.

Acquiſition is alſo uſed in a ſynonymous ſenſe with acqueſt. See ACQUEST.

ACQUITTAL, in law, is a deliverance or ſetting free from the ſuſpicion of guilt; as one who is diſcharged of a felony, is ſaid to be acquitted thereof.

Acquittal is either in fact or in law; in fact, it is where a perſon, on a verdict of the jury, is found not guilty; in law it is when two perſons are indicted, one as a principal, &c. the other as acceſſary: here if the former be diſcharged the latter of conſequence is acquitted.

Acquittal is alſo uſed for a freedom from entries and moleſtations of a ſuperior lord, on account of ſervices iſſuing out of land.

ACQUITTANCE, a diſcharge in writing for a ſum of money, witneſſing that the party is paid the ſame.

A man is obliged to give an acquittance, on receiving money; and a ſervant's acquittance for money received for the uſe of his maſter, ſhall bind him, provided the ſervant uſed to receive his maſter's

rents.

rents. An acquittance is a full diſcharge, and bars all actions, &c.

ACRA, a town of Africa, on the coaſt of Guinea, where the Britiſh have a fort and factory: W. longitude 2′. and N. latitude 5°.

ACRASIA, among phyſicians, a term ſometimes uſed for the predominancy of one quality above another; and that as well in artificial mixtures, as in the humours of the human body.

ACRE, a meaſure of land containing four ſquare roods, or one hundred and ſixty ſquare poles. See MEASURE.

The *arpent* or french acre, is equal to 1¼ of the engliſh acre. That of Straſburg is only about one half of the engliſh acre.

The ſcotch acre is to the engliſh acre by ſtatute, as 100,000 to 78,694.

We have computations of the number of acres contained in ſeveral countries: thus, England is ſaid to contain 39 millions and upwards; and the united provinces about 4 millions and one third.

ACRE-*tax*, a tax levied upon lands, at a certain rate by the acre, otherwiſe called acre-ſhot.

ACREME, in old law books, is uſed for a portion of land, containing ten acres.

ACRID, an appellation given to ſuch things as are of a ſharp, or pungent taſte.

Antient naturaliſts diſtinguiſhed two kinds of acrid taſtes; one proceeding from hot and dry, as in pepper; the other from hot and moiſt, as in garlic.

According to Grew, acrid is a taſte compounded of pungency and heat.

Acrid bodies cauſe thirſt, drineſs, heat, inflammation, &c.

They likewiſe quicken the motion of the fluids, corrode the ſolids, &c. and therefore ought to be taken with great caution.

ACRIDOPHAGI, ακριδοφαγοι, in antient geography, a fabulous nation of Ethiopia, ſaid to have lived on locuſts; from ακρις, a locuſt, and φαγω, I eat.

ACRIMONY, that quality in things which renders them acrid. See ACRID.

The acrimony of the humours of the human body may be owing either to ſtagnation, or to too great an agitation.

ACROAMATIC in the ariſtotelian ſchools, the ſame with acroatic. See ACROATIC.

ACROAMATIC is alſo uſed, in a more general ſenſe, for any thing that is ſublime, or abſtruſe: thus, we read of an acroamatic philoſophy, theology, &c.

ACROAMATICI, an appellation given to ſuch of Ariſtotle's diſciples as were inſtructed in his acroamatic, or ſublime philoſophy.

ACROATIC, in the ariſtotelian ſchools, a denomination given to ſuch lectures as were calculated only for the intimate friends and diſciples of that philoſopher, being chiefly employed in demonſtrating ſome ſpeculative, or abſtruſe part of philoſophy.

The acroatic lectures ſtood contradiſtinguiſhed from the exoteric ones, which were adapted to a common auditory.

ACROBATICA, or ACROBATICUM, in grecian antiquity, an engine on which people were raiſed aloft, that they might have the better proſpect.

It was of the ſame nature with the ſcansorium of the latins. See SCANSORIUM.

ACROCHIRISMUS, ακροχειρισμος, in grecian antiquity, a kind of gymnaſtic exerciſe performed with the fiſts, without cloſing at all.

Some make this a diſtinct exerciſe from wreſtling, and ſuppoſe it to have given the denomination acrochiriſtæ, to a particular ſet of athletæ who profeſſed it.

Others with more probability conſider it as only a ſpecies, or branch of wreſtling; ſome will have it to have been properly only a prelude to a wreſtling bout, wherewith the athletæ began to try each other's ſtrength, and bring their arms into play.

This exerciſe made part of the pancratium. Pauſanias ſpeaks of a famous pancratiaſt, named Soſtrates, who got the ſirname Acrocherſites, or Acrochiriſtes, from his having overcome all his antagoniſts at the Acrochiriſm. — It appears to have been in uſe in the age of Hippocrates, who aſcribes to it a virtue of extenuating the reſt of the body, and making the arms fleſhy. See the article PANCRATIUM.

ACROCHORDON, among antient phyſicians, a painful kind of wart, very prominent and pendulous. See WART.

Theſe are alſo called *penſiles verrucæ*, or hanging warts, and ſtand diſtinguiſhed from *ſeſſiles Verrucæ*, or *myrmecia*. See the article MYRMECIA.

Others deſcribe the acrochordon, as a harder, rougher ſort of wart, growing under the cutis, very callous, and uſually of the ſame colour with the ſkin; ſmall at bottom and bigger upwards, but rarely exceeding the ſize of a bean.

ACROMION, or ACROMIUM, in anatomy, the name of the upper part of the ſcapula, or ſhoulder-blade. See the article SCAPULA.

ACROMONOGRAMMATICUM, a kind of poem, wherein every verſe

gins with the ſame letter with which the preceding verſe terminates.

ACRONYCHAL, or ACHRONYCAL, in aſtronomy, an appellation given to the riſing of a ſtar above the horizon, at ſunſet; or to its ſetting, when the ſun riſes.

Acronychal is one of the three poetical riſings of a ſtar; the other two being called coſmical and helical. See the articles COSMICAL and HELICAL.

This term is alſo applied to the ſuperior planets Saturn, Jupiter, and Mars, when they are come to the meridian of midnight.

ACROSPIRE, the popular term for what among botaniſts is called the germ, plume, or plumule.

ACROSPIRED, in malt-making, a term uſed for ſuch grains of barley as ſhoot or ſprout out at the blade-end, as well as at the root-end. See the article MALT.

To allow barley to acroſpire, exhauſts the ſubſtance of the grain too much, and conſequently ſpoils the future malt.

ACROSTIC, in poetry, a kind of poetical compoſition diſpoſed in ſuch a manner, that the initial letters of the verſes make ſome perſon's name, title, motto, &c.

The acroſtic is a ſpecies of falſe wit, which derives its origin from the times of monkiſh ignorance.

ACROSTICUM, in botany, the name of a genus of the cryptogamia claſs of plants, and of that order called the filices, the fructifications of which are collected into cluſters, and cover the whole under ſurface of the leaves.

ACROSTOLIUM, ακροστολιον, in the naval architecture of the antients, the extreme part of the ornament uſed on the prows of their ſhips. This was of various forms; ſometimes in the ſhape of a buckler, helmet, animal, &c. but more frequently circular, or ſpiral.

It was uſual to tear the acroſtolia from the prows of vanquiſhed ſhips, as a token of victory.

Authors, not unfrequently, confound the acroſtolia with the decorations of the poop or ſtern, as alſo with the roſtra; from which, however, they are very diſtinct. See ROSTRUM and APLUSTRE.

ACROTERIA, in architecture, ſmall pedeſtals upon which globes, vaſes, or ſtatues ſtand at the ends or middle of pediments, or frontiſpieces. The height of thoſe at the extremes, ſhould be only half that of the tympanum; whereas that in the middle ought to be one eighth part more. See the articles PEDIMENT and TYMPANUM.

This term likewiſe denotes the figures placed as ornaments, or crownings, on the tops of churches; and ſometimes thoſe ſharp pinnacles, ſtanding in ranges about flat buildings, with rails and baluſtres.

ACROTERIA, among antient phyſicians, a term uſed to denote the larger extremities of the body, as the head, hands, and feet.

Acroteria is alſo uſed for the tips of the fingers, and ſometimes for the eminences of the bones.

ACROTERIASM, ακρωτηριασμος, in antient ſurgery, the amputation, or cutting off the extremities of the body. See the article AMPUTATION.

ACROTHYMIA, in ſurgery, a large tumour, uſually riſing in the ſhape of a wart, tho' ſometimes depreſſed and flat.

ACT, *actus*, in a general ſenſe, denotes the exertion, or effectual application of ſome power or faculty.

Act is diſtinguiſhed from power, as the effect from the cauſe, or as a thing produced, from that which produces it.

Philoſophers and divines mention various kinds of acts, as an infinite act, or one which requires infinite power to produce it; ſuch is creation: a finite act, or one which may be effected by a limited power; ſuch are all human actions: a tranſient act, or one exerciſed on ſomething foreign to the agent; ſuch is heating: an immanent act, or one which is effected within the agent himſelf; ſuch is the act of thinking.

ACT, among logicians, more particularly denotes an operation of the human mind; in which ſenſe comprehending, judging, willing, &c. are called acts. See the article COMPREHENSION, &c.

ACT, among lawyers, is uſed for an inſtrument or deed in writing, ſerving to prove the truth of ſome bargain or tranſaction. Thus, records, certificates, &c. are called acts.

ACT is alſo uſed for the final reſolution, or decree of an aſſembly, ſenate, council, &c. See the article ASSEMBLY, &c.

Acts of parliament are called ſtatutes; acts of the royal ſociety, tranſactions; thoſe of the french academy of ſciences, memoirs; thoſe of the academy of ſciences at Peterſburg, commentaries; thoſe of Leipſic, *acta eruditorum*; the decrees of the lords of ſeſſion, at Edinburgh, *acta ſederunt*, &c.

ACT *of faith*, *auto de fe*, in the church of Rome, a kind of jail-delivery, for burning or ſetting at liberty the priſoners of

the inquiſition, or heretics, as they are called.

An act of faith is the utmoſt exertion of prieſtly tyranny, and a reproach to humanity itſelf; the tragical part of which, is thus deſcribed by thoſe who have ſeen it. The priſoners being cloathed in proper habits, are carried, in a ſolemn proceſſion, to the place of execution; where there are as many ſtakes ſet up as there are priſoners to be burnt, with a quantity of dry furze about them. Thoſe who make profeſſion of dying in the communion of the church of Rome, are firſt ſtrangled, and then burnt to aſhes; but thoſe who perſiſt in their hereſy, are chained to ſtakes about four feet high, a board being fixed on the top of the ſtake for that purpoſe. On this the jeſuits, after repeated exhortations to be reconciled to the church, deliver them over to the devil, who, they tell them, is ſtanding at their elbow to receive their ſouls, and carry them with him into the flames of hell; which inſtance of catholic charity is followed by loud ſhouts from the deluded mob, crying out, *let the dogs beards be ſinged*: this they do by holding a buſh of flaming furze, faſtened to a pole, to their faces, till they are burnt to a coal. At laſt, fire is ſet to the furze at the foot of the ſtake; but the unhappy ſufferers are placed ſo high, that the flame ſeldom reaches higher than the ſeat on which they ſit, ſo that they ſeem rather roaſted than burnt.

Such is the wretched death theſe poor people ſuffer, and that for no other reaſon, for crime it certainly is not, than that they cannot ſwallow all the abſurdities of popery! How ſhocking is the practice! How deteſtable, beyond expreſſion, the authors and promoters of it! From ſuch a religion, and ſuch diabolical maxims, will not every proteſtant moſt fervently pray to God to deliver us?

As to thoſe who eſcape the flames, ſome are impriſoned, and others obliged to do penance during their lives.

ACT *of Grace*. See the article GRACE.

ACTS *of the Apoſtles*, a canonical book of the New Teſtament, which contains a great part of the lives of St. Peter and St. Paul, beginning at the aſcenſion of our Saviour, and continued down to St. Paul's arrival at Rome, after his appeal to Cæſar; comprehending in all about thirty years. St. Luke has been generally taken for the author of this book, and his principal deſign in writing it was to obviate the falſe acts and falſe hiſtories which began to be diſperſed up and down the world. The exact time of his writing it is not known, but it muſt have been at leaſt two years after St. Paul's arrival at Rome, becauſe it informs us that St. Paul dwelt two whole years in his own hired houſe; perhaps he wrote it, while he remained with St. Paul, during the time of his impriſonment.

ACTS, in dramatic poetry, are certain diviſions, or parts of a play, deſigned to give ſome reſpite both to the actors and ſpectators. See the article DRAMA.

The acts are always five, in regular and finiſhed pieces; a rule not unknown to the Romans, as appears from Horace,

Neu brevior quinto, neu ſit productior actu.

According to ſome, the firſt act, beſides introducing upon the ſtage the principal characters of the play, ought to propoſe the argument or ſubject of it: the ſecond, to bring this upon the carpet by carrying the fable into execution: the third, to raiſe obſtacles and difficulties: the fourth, to find remedies for theſe, or to raiſe new ones in the attempt: the fifth concludes the piece, by introducing ſome incident to unravel the whole affair.

ACTÆA, in botany, the name whereby Linnæus calls the chriſtophoriana of Tournefort. See CHRISTOPHORIANA.

ACTIAN *games*, *ludi actiaci*, in roman antiquity, thoſe inſtituted in commemoration of the victory at Actium.

Some will have it, that they were celebrated every third year; but Strabo, whoſe opinion is now generally followed, tells us, that they returned only every fifth year, and were ſacred to Apollo, thence called *actius*: hence actian years were an æra, or ſeries of years, commencing from the battle of Actium, and otherwiſe called the æra of Auguſtus.

ACTINIA, in the hiſtory of inſects, a genus of ſea-animals, of the order of the gymnarthria, naturally of a cylindric ſhape, but variable figure; the tentacula are very numerous, and are ranged in ſeveral ſeries about the mouth, which is placed at one of the extremities of the body; theſe are in a continual vibratory motion, and by that means draw ſmall animals into its mouth for food. The whole animal is equally thick in all parts, and

and about half an inch long; its tail is divided into three parts; or terminated, as it were, by three points: it is of a pale fleſh colour, except the tentacula, which have a beautiful variety of colours, red, yellow, blue, and many others: it lodges itſelf in little cavities of rocks, and of the larger ſea-plants of the ſtony kind, and is found on the coaſts of the american iſlands.

There is a variety of ſpecies, differing from each other in figure, colour, &c. two whereof are repreſented plate V. fig. 6. n° 1 and 2.

ACTION, *actio*, in a general ſenſe, ſignifies much the ſame with act. See ACT. Schoolmen make ſeveral more ſubtile than uſeful diſtinctions of action, into univocal and equivocal, immanent and tranſient, &c. See UNIVOCAL, &c.

ACTION, in mechanics and phyſics, is the preſſure or percuſſion of one body againſt another.

It is one of the laws of nature, that action and re-action are equal, that is, the reſiſtance of the body moved is always equal to the force communicated to it; or, which is the ſame thing, the moving body loſes as much of its force, as it communicates to the body moved. See the article RE-ACTION.

If a body be urged by equal and contrary actions or preſſures, it will remain at reſt. But if one of theſe preſſures be greater than its oppoſite, motion will enſue towards the parts leaſt preſſed.

It is to be obſerved, that the actions of bodies on each other, in a ſpace that is carried uniformly forward, are the ſame as if the ſpace were at reſt; and any powers or motions that act upon all bodies, ſo as to produce equal velocities in them in the ſame, or in parallel right lines, have no effect on their mutual actions, or relative motions. Thus the motion of bodies aboard a ſhip, that is carried ſteadily and uniformly forward, are performed in the ſame manner as if the ſhip was at reſt. The motion of the earth round its axis has no effect on the actions of bodies and agents at its ſurface, but ſo far as it is not uniform and rectilineal. In general, the actions of bodies upon each other depend not on their *abſolute*, but *relative* motion. See the article MOTION.

Quantity of ACTION is uſed to denote the product of the weight of a body into its velocity, and into the ſpace gone through; in proportion to which body, the action is always greater or leſs.

When a body is tranſported from one place to another, the action is the greater, in proportion to the maſs, to the velocity, or rapidity of the motion, and to the ſpace through which the body is carried.

Monſ. de Maupertuis lays it down as a general principle, that "whenever any "change happens in nature, the quan- "tity of action neceſſary to produce "this change is always the leaſt poſſible." And this, he ſays, is a law indicating the higheſt wiſdom.

From this general principle, and the common rule for finding a minimum by fluxions, he deduces the known laws of percuſſion, for hard and elaſtic bodies, and even the laws of reſt, as he calls them; that is, of the equilibrium, or equipollency of preſſures.

This ingenious author ſeems to think, that the laws of motion, thus deduced, afford a ſtronger proof for the exiſtence of God, or of a firſt intelligent cauſe, than the other arguments commonly alledged, and deduced from the order of nature. But we apprehend, that few metaphyſicians will be of his opinion. The proof of a God from the order of nature ſeems to depend on two principles. 1. That there is an order in nature. 2. That this order is contingent. For if this order was not contingent, but abſolutely neceſſary, as Spinoſa, and other atheiſts pretend, it ſeems that no ſufficient reaſon, from the order of nature, could be aſſigned for the exiſtence of a firſt intelligent cauſe. Now, Monſ. de Maupertuis not having eſtabliſhed the contingency of his principle of the minimum of action, his argument ſeems defective in this reſpect; not to mention others.

Mr. Euler has demonſtrated, that in the trajectories deſcribed by bodies urged by central forces, the velocity, multiplied by the element of the curve, is always a minimum. Monſ. Maupertuis looks on this as an application of his principle, to the motion of the planets.

ACTION in ethics, ſomething done by a free or moral agent, capable of diſtinguiſhing good from evil.

The eſſence of a moral action conſiſts in being done knowingly and voluntarily: that is, the agent muſt not only be able to diſtinguiſh whether it be good or bad in itſelf; but he muſt likewiſe be entirely free from compulſion of any kind,

and at full liberty to follow the dictates of his own underſtanding. Hence the actions of idiots, ſlaves, *&c.* cannot be called moral. Hence alſo appears the abſurdity of fataliſm, which undermines the very foundation of morality.

ACTION, in rhetoric, may be defined, the accommodation of the voice, but more eſpecially the geſture of an orator, to the ſubject he is upon.

It is chiefly directed to the paſſions of the audience, over whom it has an abſolute ſway, in a manner commanding their aſſent, and exciting in their breaſts ſuch emotions as the orator wants to raiſe.

The ſurpriſing and almoſt incredible power of action, has been known at all times. Cicero tells us, "that it "does not ſo much matter what an orator "ſays, as how he ſays it." Horace, in his art of poetry, is no leſs explicit in ſetting forth its vaſt influence on mankind.

With thoſe who laugh, our ſocial joy appears;
With thoſe who mourn, we ſympathize in tears,
If you would have me weep, begin the ſtrain,
Then I ſhall feel your ſorrows; feel your pain.

After all, the utility and even morality of action is controverted. Is it juſt, ſay ſome, to force the aſſent of mankind by addreſſing their paſſions, without firſt convincing their reaſon? In ſuch a caſe, is it not to be feared that the orator will warp them to the ſide he himſelf favours? That he will make this foible of mankind ſubſervient to his own views? *&c.* On the other hand, is it not evident, that mankind ſtand in need of ſuch a powerful ſpring to ſet them on action? If ſo, where can be the injuſtice in making uſe of it, eſpecially in conjunction with reaſon and ſolid argument?

ACTION, in poetry, denotes much the ſame with the fable, or ſubject of an epic or dramatic poem; only that the former may be real, whereas the latter is always feigned.

It is neceſſary to the perfection of an action, that it be but one, that it be entire, that it be important or affecting, and that it have a ſuitable duration, without being interrupted. It is no breach, however, of the unity, or integrity of the principal action, that there are ſubordinate ones, ſerving to obſtruct the hero's meaſures.

In dramatic poetry, the principal action, together with theſe ſecondary ones, are divided into five acts. See the article ACT.

ACTION, in a theatrical ſenſe, is nearly the ſame with action among orators; only the actor adapts his action to an aſſumed character, whereas the orator is ſuppoſed to be in reality what his action expreſſes, whether joyful, grieved, *&c.* The perfection of theatrical action conſiſts in imitating nature, or expreſſing, in a lively manner, the behaviour of a man of the aſſumed character and circumſtances.

ACTION, in painting and ſculpture, denotes the poſture of a ſtatue or picture, ſerving to expreſs ſome paſſion, *&c.*

ACTION, in the military art, is an engagement between two armies, or between different bodies of troops belonging thereto. This term is likewiſe uſed to ſignify ſome memorable act done by an officer or commander of a body of troops.

ACTION *of the mouth*, in the manege, ſignifies a horſe's champing upon the bit of the bridle, thereby emiting a ropy foam; which is looked upon as a ſign of health, vigour, and mettle.

ACTION, in law, denotes either the right of demanding, in a legal manner, what is any man's due: or the proceſs brought for recovering the ſame.

Actions are either criminal or civil.

Criminal actions are to have judgment of death, as appeals of death, robbery, *&c.* or only judgment for damage to the injured party, fine to the king, and impriſonment.

Under the head of criminal actions may likewiſe be ranked penal actions, which lie for ſome penalty or puniſhment on the party ſued, whether it be corporal or pecuniary.

Alſo actions upon the ſtatute, brought on breach of any ſtatute, or act of parliament, by which an action is given that did not lie before; as where a perſon commits perjury to the prejudice of another, the injured party ſhall have an action upon the ſtatute. And laſtly, popular actions, ſo called, becauſe any perſon may bring them on behalf of himſelf and the crown, by information, *&c.* for the breach of ſome penal ſtatute.

Civil actions are divided into real, perſonal, and mixt.

Real action is that whereby a man claims a title, lands, tenements, *&c.* in fee, or for life, and this action is either poſſeſſory, or anceſtral; poſſeſſory, where the lands

lands are a perſon's own poſſeſſion or ſeiſin; anceſtral, when they were of the poſſeſſion or ſeiſin of his anceſtors.

Perſonal action, is one brought by one man againſt another, upon any contract for money or goods, or on account of treſpaſs, or other offence committed; and thereby, the debt, goods, chattels, *&c.* claimed.

Mixt action, one lying as well for the thing demanded as againſt the perſon who has it; and on which the thing is recovered with damages for the wrong ſuſtained; ſuch is an action of waſte, ſued againſt a tenant for life, the place waſted being recoverable, with treble damages for the wrong done.

All actions ſeem to be temporary. A real action may be preſcribed againſt, in five years after a fine levied, or recovery ſuffered. Writs of formedon for any title to lands in being, muſt be ſued out within twenty years. Actions of debt, account, detinue, trover and treſpaſs, are to be brought within ſix years; of aſſault and battery within four years; and of ſlander, within two years, after cauſe of action, and not afterwards. However, it ought to be obſerved, that the right of action in theſe caſes is ſaved to infants, feme coverts, and perſons in priſon or beyond ſea, *&c.* ſo as they commence their ſuits within the time limited after their imperfections are removed.

Actions may be brought againſt all perſons whatever, but thoſe who are attainted of high treaſon or felony, an outlawed or excommunicated perſon, *&c.* cannot bring any action till pardoned, abſolved, *&c.* A feme covert muſt ſue with her huſband, and infants by their guardians.

CTION *upon the caſe*, a general action which lies for the redreſs of wrongs and injuries done without force, and which by law are not provided againſt.

This at preſent is the moſt frequent of all actions, being brought in all caſes where no certain form has been eſtabliſhed; and the reaſon why it is called an action upon the caſe, is becauſe the whole cauſe or caſe is ſet forth in the writ. It may be brought as well where there is another action, as where no other lies.

Action upon the caſe for words, is brought where a perſon is injured in his reputation; and for words which affect the life, office, trade, *&c.* or tend to the loſs of preferment in marriage, or otherwiſe; or to the diſinheritance or other damage of a perſon.

Prejudicial ACTION, otherwiſe called *preparatory*, one which ariſes from ſome doubt in the principal; as, where one ſues his younger brother for lands deſcended from the father, on which it is objected to him that he is a baſtard: Here this point of baſtardy is to be firſt tried or judged, before the principal cauſe can proceed.

ACTION *of a writ*, is when a perſon pleads ſome matter by which is ſhewn, that the plaintiff had no cauſe to have the writ brought; though, perhaps, he may have another writ for the ſame matter. It is hence called, a plea to the action of the writ, in contradiſtinction from a plea to the action.

ACTION, among phyſicians. The actions of the human body, are divided into the vital, animal, or natural ones.

Vital actions are thoſe, without which life could not be maintained: ſuch is the motion of the heart and lungs.

Under animal actions are comprehended the ſenſes, imagination, judgment, and voluntary motions, without which we could not live comfortably.

Laſtly, natural actions are thoſe which, though not ſo immediately neceſſary to life but that we may live ſome time at leaſt without them, yet are abſolutely neceſſary to our well-being: ſuch is digeſtion.

ACTION, in commerce, a term uſed abroad for a certain part or ſhare of a public company's capital ſtock. Thus, if a company has 400,000 livres capital ſtock: this may be divided into 400 actions, each conſiſting of 1000 livres. Hence, a man is ſaid to have two, four, *&c.* actions, according as he has the property of two, four, *&c.* thouſand livres, capital ſtock.

The transferring of actions, abroad, is performed much in the ſame manner as ſtocks are with us.

ACTIONARY, or ACTIONIST, in commerce, a term uſed among foreigners, for the proprietor of an action, or ſhare of a public company's ſtock.

ACTIVE, in a general ſenſe, denotes ſomething that communicates motion or action to another, in which ſenſe it ſtands oppoſed to paſſive. See PASSIVE.

Thus we ſay active cauſe, active principles, *&c.* The quantity of motion in the world, Sir Iſaac Newton ſhews, muſt be always

always decreasing, in virtue of the vis inertiæ, &c. so that there is a necessity for certain active principles to recruit it: such he takes the cause of gravity to be, and the cause of fermentation. Adding, that we see but little motion in the universe, except what is owing to those active principles.

ACTIVE *principles*, in chemistry, those which act of themselves, without any foreign assistance: such are mercury, sulphur, and salt, supposed to be; phlegm and earth being reckoned passive ones.

Some authors will have sulphur, or fire, to be the only active principle and source of all the motion in the world.

Others again, with what propriety we shall not take upon us to say, call oil, salt, and spirit active principles, only because their parts are better fitted for motion than those of earth or water.

ACTIVE, among grammarians, an appellation given to words expressing some action, as I write, I read, &c.

These are denominated verbs, or active verbs, from the latin *verbum*, a word. See the article VERB.

ACTIVITY, in a general sense, denotes that faculty or power, from whence things are denominated active. See ACTIVE.

Hence all that space, wherein any body extends its virtue or influence, is called the sphere of its activity.

ACTOR, in a general sense, signifies one who acts, or does some thing. See the articles ACT and ACTION.

ACTOR, in a theatrical sense, is a man who acts some part or character, in a play. See ACTION and THEATRE.

Actors were at first few in number, one or two persons often acting all the characters in a play. At present, however, their number is not limited; a circumstance which creates such a diversity as must greatly interest the spectators.

It is remarkable with what difference actors were treated among the antients. At Athens, they were held in such esteem, as to be sometimes pitched on to discharge embassies, and other negociations: whereas, at Rome, if a citizen became an actor, he thereby forfeited his freedom. Among the moderns, actors are best treated in England; the French having much the same opinion of them that the Romans had.

ACTRESS, a woman who performs, or acts, some character on the stage. See the article ACTOR, *supra*.

Actresses, or women actors, were unknown to the antients, among whom men always performed the part of women: and hence one reason for the use of masks among them.

Actresses are even said not to have been introduced on the English stage, till after the restoration of king Charles II. who has been charged with contributing to the corruption of our manners, by importing this usage from abroad. But this can be but partly true: the queen of James I. acted a part in a pastoral: and Pryn, in his Histriomastix, speaks of women actors in his time as whores; which was one occasion of the severe prosecution brought against him for that book.

ACTUAL, an appellation given to such things as exist truly and absolutely. Thus, philosophers speak of actual heat, cold, &c. in opposition to virtual or potential; divines, of actual grace, in opposition to that which is habitual. See the articles, HEAT, COLD, and GRACE.

ACTUAL *sin*, that which is committed by a person himself: it is opposed to original sin. See the article ORIGINAL.

ACTUARIÆ *naves*, in roman antiquity, a kind of ships designed chiefly for expedition.

ACTUARIUS, among the antients, an officer, or rather notary, appointed to write down the proceedings of a court.

Actuarii were also officers who kept the military accounts, and distributed the corn to the soldiers.

ACTUATE, a term signifying to stir up, or put in motion: thus, to actuate a person, is to prompt him to do something.

ACTUS, in antiquity, a measure of length containing one hundred and twenty roman feet. The square of the actus was just half of the roman acre or jugerum. See the article ACRE.

ACULEATE, or ACULEATED, an appellation given to any thing that has aculei, or prickles: thus fishes are divided into those with aculeated, and not aculeated fins. See the article FISH.

ACULEI, in natural history, a term used for the prickles found on some animals as well as plants; also for the stings of bees.

ACULER, in the manege, is said of a horse, when working upon volts, he does not go far enough forward, at every time or motion; so that his shoulders embrace or take in too little ground, and his croupe comes too near the centre of the volt. Horses are naturally inclined

clined to this fault in making demi-volts. See the article VOLT.

ACUMEN, in the antient muſic, a ſound produced by raiſing the voice to a high pitch.

ACUMINA, in antiquity, a kind of military omen, taken from the points or edges of ſpears, ſwords, &c.

ACUPUNCTURE, in the chineſe and japaneſe ſurgery, a method of curing ſeveral diſorders, by pricking the part affected with a needle.

This operation is performed with a gold or ſilver-needle, which they ſtrike into the body with their hand, or with a hammer provided for that purpoſe. Not only the legs, arms, and the like parts, are pricked in this manner; but likewiſe the head and abdomen.

They have recourſe to acupuncture in the head for head-achs, lethargies, epilepſies, convulſions, diſeaſes of the eyes, &c. and in the abdomen for colics, dyſenteries, want of appetite, ſurfeits, &c.

ACUS, in ichthyology, the name of two diſtinct genuſes of fiſhes; the one called the acus of Ariſtotle, and the other the acus of Bellonius, or of Oppian.

Of the former kind, called in engliſh, the needle-fiſh or tobacco-pipe fiſh, there are two ſpecies, the larger and ſmaller. The larger is about a cubit long, and not thicker than a man's finger. It has two very ſmall fins at the gills, and another at the back. Its anus is nearly in the middle of the body. See plate VI. fig. 1.

Of the latter kind, called by us the garfiſh, there are alſo two ſpecies, one with ſcales, and the other not. The under jaw of this laſt is longer than the upper one, and both are thick ſet with ſharp teeth. It has only one back-fin, and the tail is forked. See plate VI. fig. 2.

ACUTE, an appellation given to ſuch things as terminate in a ſharp point, or edge: thus, we ſay an acute angle, acute-angled triangle, &c. See the articles ANGLE and TRIANGLE.

ACUTE *accent*, in grammar. See the article ACCENT.

ACUTE-*angled cone*. See the article CONE.

ACUTE *diſeaſes*, among phyſicians, thoſe which ſuddenly riſe to their higheſt pitch, and terminate in a few days.

In this ſenſe the word ſtands oppoſed to chronical. Dr. Quincy thinks, an acute diſeaſe may be defined, that which is attended with an increaſed velocity of blood. Acute diſeaſes are extremely dangerous, as not affording time to adminiſter proper medicines.

ACUTE, in muſic, an epithet given to ſharp or ſhrill ſounds, in oppoſition to thoſe called grave.

ACUTENESS, that property of things from whence they are denominated acute. See the article ACUTE.

The cauſe or principle of the acuteneſs of ſounds, is reſolved into the greater degree of tenſion of the ſonorous body; by virtue of which, its parts vibrate more ſwiftly, or make a greater number of returns in the ſame time. But this is not the only principle, ſounds being alſo more or leſs acute, according to the ſpecies of matter, and the leſs or greater quantity of it. Thus a ſilver body yields a more acute ſound than a gold one: one ſolid foot, than two; a ſhorter ſtring gives a more acute ſound than one that is longer, of the ſame matter, diameter, and tenſion.

ACUTITION, or ACUITION, in a general ſenſe, ſignifies the ſame with acuteneſs.

ACUTITION, in grammar, the pronouncing or marking a ſyllable with an acute accent. See ACCENT or ACUTE.

ACUTITION, among phyſicians, the ſharpening or increaſing the force of any medicine.

ACYROLOGIA, in philology, denotes an improper word, phraſe, or expreſſion: it differs a little from the catachreſis. See the article CATACHRESIS.

AD, a latin prepoſition, expreſſing the relation of one thing to another.

It is frequently prefixed to other words: Thus,

AD *extra*, among ſchool divines, a term applied to thoſe operations of the deity, the effect whereof terminates without the divine eſſence, as creation, regeneration, &c.

The operations ad extra are oppoſed to thoſe ad intra, or ſuch as are confined within the divine eſſence.

AD *hominem*, among logicians, an argument drawn from the profeſſed belief or principles of thoſe with whom we argue.

AD *ludos*, in roman antiquity, a kind of puniſhment, whereby the criminals entertained the people, either by fighting with wild beaſts, or with each other. Barbarous diverſion!

AD *metalla*, in roman antiquity, the puniſhment of ſuch criminals as were condemned to the mines, and therefore called metallici. A piece of excellent policy,

policy, thus to make the punishment of rogues doubly subservient to the good of the common wealth!

AD *valorem*, among the officers of the king's revenue, a term used for such duties, or customs, as are paid according to the value of the goods sworn to by the owner. Books imported from abroad formerly paid duties *ad valorem*; instead of which bound books now pay fourteen shillings per hundred weight, and the unbound ones seven. Stat. 9. Geo. I. c. 19.

ADAGE, a short sentence or proverb, containing some wise saying, or remarkable observation.

We have a collection of greek and roman adages by Erasmus.

ADAGIO, softly, leisurely, in music, a term used to denote the slowest of all times, the grave only excepted. See the articles TIME and GRAVE.

Sometimes it is repeated adagio adagio, to signify a still greater retardation of time.

ADAMANT, or *Adamas*. See the next article.

ADAMAS, the adamant or diamond. See the article DIAMOND.

ADAMAS, or *Adamant*, is sometimes also used for other things, as the spume or scoriæ of gold, the highest tempered iron, the magnet, &c. See the articles SCORIA, IRON, and MAGNET.

ADAM'S *pomum*, in anatomy, a prominence in the fore part of the throat; so called from the idle notion, that a piece of the forbidden apple stuck in Adam's throat, and occasioned this tumour, which in reality is only the convex part of the first cartilage of the larynx.

ADAMIC *earth*, *terra adamica*, a name by which some call the common clay, supposed to be the adamah, or ruddy earth, of which the first man was formed.

ADAMITES, in church history, a name sometimes used for the descendants of Adam and Seth, more usually called sethites. See the article SETHIANS.

Adamites is more particularly used, by ecclesiastical writers, for a sect of heretics who went naked; pretending that mankind were restored to the original state of innocence, wherein Adam was created.

They were likewise accused of holding a community of women, and of lying with them in public. The protestants and papists mutually charge each other with having adamites among them.

Præ-ADAMITES. See PRE-ADAMITES.

ADAR, in hebrew chronology, the twelfth month of their ecclesiastical, and the sixth of their civil, year. It has only twenty-nine days, and answers to the latter end of our February and beginning of March.

ADARCE, in the materia medica of the antients, a kind of salt found concreted about reeds and other vegetables in form of incrustations.

It was applied externally in various cutaneous disorders, as a detergent and resolver; also for the teeth.

ADARCON, in jewish antiquity, a coin mentioned in the scriptures, usually of gold. Authors are not agreed about its value, some making it the same with the golden pieces called darics, others equal only to the attic drachm, and others twice as much.

ADARTICULATION, a term used by some physicians for what is more usually called arthrodia and diarthrosis.

ADDA, a considerable river of Italy, which taking its rise in the province of Bormio, traverses the lake di Como, and afterwards passing through the Milanese, falls into the Po, a little to the west of Cremona.

ADDEPHAGIA, in a general sense, signifies gluttony or voraciousness; in which sense, it is made to comprehend the bolimia, pica, malacia, &c.

Addephagia, in a more particular sense, is used for greediness in children, which makes them cram down new food before the old is well digested.

ADDER, in zoology, a name by which the viper is sometimes called. See VIPER.

Water-ADDER, in zoology, the english name of the natrix. See the article NATRIX.

ADDER-STUNG, is said of cattle when stung by adders, or bit by a hedge-hog or shrew. For this, some use an ointment made of dragon's blood, with a little barley-meal and the white of eggs.

ADDER'S *tongue*, *ophioglossum*, in botany, a genus of the cryptogamia class of plants, and of that order called the filices without any visible flower; the fruit in an oblong, double, or distichous capsule divided by transverse articulations into a great number of cells, containing small seeds of an oval shape. See plate VI. fig.

Adder's tongue is esteemed as a vulnerary, and prescribed either internally or externally. It is a spring plant, to be found only in April and May, and may easily be distinguished by its spike or tongue. The common people are extremely

tremely fond of it, giving the expreſſed juice internally for wounds, bruiſes, &c. or applying an ointment of it, made with lard or May-butter externally.

ADDEXTRATORES, among eccleſiaſtical writers, denote the pope's mitre-bearers; ſo called, according to Ducange, on account of their walking at the pope's right hand, when he rides to viſit the churches.

ADDICE, or ADZE, a kind of crooked ax, fitted for cutting the hollow ſide of a board, &c.

ADDICTI, in roman antiquity, a kind of ſlaves who were reduced to that ſtate, by reaſon they could not ſatisfy ſome creditor; whoſe ſlaves they became, till they could pay or work out the debt.

ADDICTION, *addictio*, among the Romans, was the making over goods to another, whether in the way of ſale, or by ſentence of court: the goods ſo delivered were called *bona addicta*.

Debtors were ſometimes delivered over in the ſame manner, and thence called *ſervi addicti*. See the article ADDICTI.

ADDITAMENT, *additamentum*, a term uſed, by ſome phyſicians and chemiſts, for whatever new ingredients are added to a compoſition or menſtruum, to render it more efficacious.

ADDITION, in a general ſenſe, is the uniting or joining ſeveral things together: or, it denotes ſomething added to another.

ADDITION, in arithmetic, the firſt of the four fundamental rules of that art, whereby we find a ſum equal to ſeveral ſmaller ones.

The rule for addition of integers, is, to place all the numbers of a like kind under one another; that is, the units under units, tens under tens, hundreds under hundreds, &c. and ſingly to collect the ſums of each. To do this, we begin with the units, and if their ſum does not exceed 9, we ſet it down underneath; but if it exceeds 9, the exceſs only is to be ſet down; carrying one to the next row for every ten, and ſo of the other rows.

675
982
1657

For example, if the ſums 675 and 982 were given to be added, write either of them under the other, *viz.* units under units, tens under tens, &c. Then, beginning with the row of units, I ſay 2 and 5 make 7, which being leſs than 9, I write it underneath; after which, paſſing to the row of tens, I ſay 8 and 7 make 15, the laſt of which numbers, *viz.* 5 only is to be ſet down, and the other carried to the next row: laſtly, proceeding to the row of hundreds, I ſay 1 carried and 9 make ten, which added to 6 make 16: this ſum is ſet down whole, as being that of the laſt row; and thus the ſum of both, *viz.* 1657, is found. See the example in the margin.

The ſame method will hold, where there are a great many ſums to be added, as in the example annexed: for, finding the ſum of the firſt row to be 18, I ſet down 8, and carry the 1 to the next row: the ſum of the ſecond row, together with the one carried, I find to be 30, and accordingly ſet down 0, and carry 3 to the row of hundreds: the ſum of the third row, and the 3 carried, being 11; I ſet down 1, and carry 1: the ſum of the fourth row, together with the 1 carried, is 24; I ſet down 4, and carry 2: laſtly, the ſum of the fifth row, together with the 2 carried, being 9, I ſet it down. Hence the ſum of the whole is 94108.

49583
26258
18041
150
75
94108

The demonſtration of the rule of addition is very eaſy; depending entirely upon the notation in uſe, and the axiom, that the whole is equal to all the parts taken together.

ADDITION *of fractions*, is the finding the ſum of two or more given fractions, whether vulgar or decimal.

ADDITION *of vulgar fractions*. See the article FRACTION.

ADDITION *of decimal fractions* is performed in the ſame manner as that of whole numbers, only care muſt be taken to place the decimal points always under each other.

86.2403
521.058
2940.706
3.16
3551.1643

Thus, in the example annexed, the ſum of the firſt row is 3, which I ſet down; that of the ſecond row, 14, whereof 4 is ſet down and 1 carried: and ſo of the reſt, as expreſſed in the margin.

ADDITION, in algebra, is the connecting, or putting together, all the letters or numbers to be added, with their proper ſigns + or −. See ALGEBRA.

1. To add quantities that are like, and have like ſigns, add together their coefficients, to the ſum of which prefix the common ſign, and ſubjoin the common letter or letters. Thus,

To + 19 *a*	To − 2 *b*
Add + 6 *a*	Add − 5 *b*.
Sum + 25 *a*	Sum − 7 *b*

To $4a+b$	To $a-5x$
Add $2a+8b$	Add $2a-x$
Sum $6a+9b$	Sum $3a-6x$

2. To add quantities that are like, but have unlike ſigns, ſubſtract the leſſer coefficient from the greater, prefix the ſign of the greater to what remains, and ſubjoin the common letters. Thus,

To $-5a$	To $+8b$
Add $+2a$	Add $-2b$
Sum $-3a$	Sum $+6b$
To $a-6b$	To $4a-8b$
Add $-3a+2b$	Add $-4a+8b$
Sum $-2a-4b$	Sum $0\quad 0$

The proof of this rule is eaſily deducible from the nature of poſitive and negative quantities. See the article QUANTITY.

If there are more than two quantities to be added, firſt add the poſitive ones together into one ſum, and then the negative, by caſe I; which ſums are to be again added by caſe II. Thus,

To add $+5a$, $-8a$ (To the ſum of the poſitive $+14a$) $+9a$, $-a$ (Add that of the negative. $-9a$)

Sum of all is $+5a$

3. To add quantities that are unlike, ſet them all down after one another, with their ſigns and coefficients prefixed. Thus,

To	$+4a$	To	$+a$
Add	$+2b$	Add	$-7x$
Sum	$+4a+2b$	Sum	$+a-7x$
	To		$+4a-2b$
	Add		$-8y+4x$
	Sum		$+4a-2b-8y+4x$

ADDITION *of fractions*, in algebra. See the article FRACTION.

ADDITIONS, in law, denote all manner of deſignations given to a man, over and above his proper name and ſurname, to ſhew of what eſtate, degree, myſtery, place of abode, &c. he is.

Additions of degree are the ſame with titles of honour, or dignity, as knight, lord, earl, duke, &c.

Additions of eſtate are yeoman, gentleman, eſquire, and the like.

Additions of myſtery, or trade, are carpenter, maſon, painter, engraver, and the like.

Additions of place, or reſidence, are London, Edinburgh, Briſtol, York, Glaſgow, Aberdeen, &c.

Theſe additions were ordained to prevent one man's being grieved, or moleſted, for another; and that every perſon might be certainly known, ſo as to bear his own burden.

If a man is of different degrees, as duke, earl, &c. he ſhall have the moſt worthy; and the title of knight, or baronet, is part of the party's name, and therefore ought to be rightly uſed; whereas that of eſquire, or gentleman, being as people pleaſe to call them, may be uſed, or not, or varied at pleaſure.

A Peer of Ireland is no addition of honour here; nay, the law-addition to the children of britiſh noblemen is only that of eſquire, commonly called lord.

Writs without the proper additions, if excepted to, ſhall abate; only where the proceſs of outlawry doth not lie, additions are not neceſſary. The addition of a pariſh, not in any city, muſt mention the county, otherwiſe it is not good.

ADDITION *of ratios*, the ſame with what is otherwiſe called compoſition of ratios. See the articles COMPOSITION and RATIO.

ADDITION, among diſtillers, a general term for ſuch things as are added to the waſh, or liquor, while fermenting, with a view to increaſe the vinoſity and quantity of the ſpirit, or to give it a particular flavour.

Additions which the leſs intelligent confound with ferments, are chiefly ſalts, acids, aromatics, and oils. Tartar, nitre, or common ſalt, reduced to a fine powder; alſo the juice of ſeville-oranges, lemons, ſpirit of ſulphur, &c. added to the liquor, ſerve chiefly to improve the vinous acidity of the ſpirit. But for increaſing its quantity, or giving it a fine flavour, they uſe the pungent aromatics and oils. A large quantity of rectified, or any other ſpirit, may likewiſe be mixed with the liquor to be diſtilled; which will not only come back, but conſiderably increaſe the quantity of ſpirit to be procured from the diſtillation.

ADDITION, in heraldry, ſomething added to a coat of arms, as a mark of honour; and therefore directly oppoſite to abatement. See the article ABATEMENT.

Among additions we reckon a bordure, quarter, canton, gyron, pile, &c. See the articles BORDURE, QUARTER, &c.

In this manner the arms of a kingdom, or ſtate, have been added to thoſe of noblemen; as happened to the dukes of Boufflers and Richlieu in the late italian war, who, by a decree of the ſenate of Genoa, were permitted to add the enſigns of that republic to thoſe of their families.

ADDITION, in muſic, a dote marked on the

the right side of a note, to signify that it is to be sounded or lengthened half as much more as it would have been without such mark. See NOTE and CHARACTER.

ADDITIONAL, in a general sense, denotes something over the usual sum or quantity.

ADDITIONAL *duties*, those charged upon certain commodities, over and above what they were formerly obliged to pay.

ADDITIVE, in a general sense, signifies something to be added: mathematicians speak of additive ratios, astronomers of additive equations: thus

ADDITIVE *ratio* is used by some writers, for that whose terms are disposed to addition, that is, to composition, in opposition to subtractive ratio, whose terms are disposed to subtraction, *i. e.* to division. Suppose the line $a\,c$ divided in the points b and x,

$a \quad b \quad x \quad c$

the ratio between $a\,b$ and $b\,x$ is additive; because the terms $a\,b$ and $b\,x$ compose the whole $a\,x$. But the ratio between $a\,x$ and $b\,x$ is subtractive, because $a\,x$ and $b\,x$ differ by the line $a\,b$.

ADDITIVE *equations*, in astronomy, those which are to be added to the sun's mean anomaly, in order to find the true one. See EQUATION, ANOMALY, *&c.*

ADDRESS, in a general sense, denotes the nice management of an affair, or the transacting it with great propriety and skill.

ADDRESS is, more particularly, used for a speech made to the king in the name of some considerable body of men, by way of congratulation, petition, or remonstrance.

Addresses of parliament were first set on foot under Oliver Cromwell.

ADDUCENT *muscles*, among anatomists, the same with those more usually called adductors. See the article ADDUCTOR.

ADDUCTION, *adductio* among anatomists, denotes the action of the muscles called *adductores*. See ADDUCTOR.

ADDUCTOR, in anatomy, a general name for all such muscles as serve to draw one part of the body towards another. Thus,

ADDUCTOR *brachii* is a muscle of the arm, serving to bring it towards the trunk of the body.

ADDUCTOR *indicis*, a muscle of the forefinger, which draws it towards the thumb.

ADDUCTOR *oculi*, a muscle of the eye, directing its pupil towards the nose; and otherwise called *bibitorius*, for a like reason.

Anatomists reckon up several other adductors, as the *adductor pollicis*, the *adductor pollicis pedis*, *adductor minimi digiti pedis*, *adductor prostatæ*, *&c.*

ADEA, a province of Annian, on the eastern coast of Africa, called by some Adel.

ADEB, in commerce, a weight used in Egypt, principally for weighing rice.

ADEL, in geography, the capital city of Adea. It is situated about three hundred miles south of the straits of Babelmandel.

ADELSCALC, in old writers, denotes a servant of the king.

Adelscalcs, among the Bavarians, seem to have been the same with royal thanes among the Saxons, and the *ministri regis* in antient charters.

ADEMPTION, *ademptio*, among civilians, denotes the revocation of some donation or favour. See REVOCATION.

The ademption of a legacy may be done either in express terms, or indirectly, by disposing of it otherwise.

ADEN, a sea-port town of Arabia Felix, a little eastward of the straits of Babelmandel.

ADENANTHERA, in botany, a genus of the Decandria Monogynia class of plants, the calyx of which is a single-leaved perianthium, very small, and cut into five segments: the corolla consists of five lanceolated bell-shaped petals, the fruit is a long membranaceous compressed pod, containing several round seeds.

ADENOGRAPHY, *ἀδενογραφια*, or ADENOLOGY, that part of anatomy, which treats of the glands. See GLAND.

ADENOSE, *abscess*, *adenosus abscessus*, is used for a hard tubercle, difficult to be discussed, and resembling a gland. See the article ABSCESS.

ADEPS, in anatomy, denotes the fat found in the abdomen; differing from the common fat or *pinguedo*, as being thicker, harder, and of a more earthy substance.

ADEPS, among physicians, is used in a more general sense, for all kinds of animal fat: these they prescribe for their ripening quality. See the article RIPENERS.

ADEPTS, the name given to the proficients in alchemy, particularly those who pretend to have found out the philosopher's stone, and the panacea, or universal medicine.

Alchemists will have it, that there are always twelve adepts; the places of those who die being immediately supplied by others of the fraternity.

ADEQUATE, in a general ſenſe, ſomething exactly correſponding with another. Thus,

ADEQUATE *ideas*, are thoſe which perfectly repreſent all the parts and properties of the object. See the article IDEA.

In this ſenſe, the idea of a figure bounded by a curve line, which returns into itſelf, and whoſe parts are all equally diſtant from a certain point in the middle, is an adequate idea of a circle.

All ſimple and abſtracted ideas are adequate ones, becauſe they repreſent objects as they really are: whereas thoſe of ſubſtances are inadequate, in regard our knowledge of ſubſtances is extremely defective.

ADESSENARIANS, *adeſſenarii*, a ſect of chriſtians, who maintain that Jeſus Chriſt is really preſent in the euchariſt, though not by way of tranſubſtantiation. See the article TRANSUBSTANTIATION.

The adeſſenarians differ among themſelves, ſome of them holding that the body of Jeſus Chriſt is in the bread; others, that it is about the bread; others, that it is with the bread; and others, that it is under the bread. See EUCHARIST.

ADFECTED *equations*, in algebra, thoſe wherein the unknown quantity is found in two or more different powers: ſuch is $x^3 - ax^2 + bx = a^2b$.

For the ſolution of theſe and other equations. See the article EQUATION.

ADFILIATION, *adfiliatio*, a gothic cuſtom, whereby the children of a former marriage are put upon the ſame footing with thoſe of the ſecond marriage. This is otherwiſe called *unio prolium*, and ſtill retained in Germany, under the name *einkindſchafft*.

ADHATODA, in botany, a genus of plants, the flower of which is perſonated, conſiſting of one leaf divided into two lips, the upper one of which is bent backwards, and the lower one divided into three ſegments; the piſtil, which is fixed into the lower part of the flower, in the manner of a nail, finally becomes a club-faſhioned fruit, or capſule, flat, and divided into two cells, containing ſeveral ſmall, compreſſed, and heart-like ſeeds. See plate VI. fig. 4.

This plant is called by Linnæus Juſticia: for the characters of which, according to that botaniſt's ſyſtem, ſee JUSTICIA.

ADHESION, in phyſiology, is uſed to denote the ſticking together of two bodies. The adheſion of leaden balls is ſo very conſiderable, that with two (not weighing above a pound each, nor touching upon more than $\frac{1}{10}$ of a ſquare inch ſurface) above one hundred and fifty pounds weight have been raiſed. In order to do this, the ſurfaces by which they touch muſt be finely planed, with the edge of a ſharp penknife, and equally preſſed together with a conſiderable force, with a gentle turn of the hand at the ſame time; and thus two common leaden bullets will adhere ſo firmly together, as to require upwards of fifty pounds weight to ſeparate them. In poliſhed ſurfaces that are very hard, as glaſs, braſs, &c. it is impoſſible to bring the bodies into ſuch cloſe contact as to cohere without the interpoſition of water, or ſomething humid to fill the pores by expelling the air contained therein, which prevents the planes coming together while dry; the humidity in this caſe proves a cement, which holds the planes together by all its force of attraction on either ſide.

Muſchenbroek has given many curious experiments on the adheſion of bodies, which he attributes to attraction. See the article ATTRACTION.

ADHESION, among logicians, denotes the maintaining ſome tenet, merely on account of its ſuppoſed advantage, without any poſitive evidence for its truth.

ADHESION, in medicine and anatomy. There are frequent inſtances of the adheſion of the lungs to the pleura and diaphragm, which occaſions many diſorders. We alſo read of adheſions of the inteſtines of the dura mater to the cranium, &c.

ADJACENT, an appellation given to ſuch things as are ſituated near, or adjoining to each other: thus we ſay, an adjacent angle, an adjacent country, &c.

ADIANTUM, *maidenhair*, in botany, a genus of the cryptogamia claſs of plants, and of that order called the filices, the characters of which are not perfectly aſcertained, having no viſible flower; the ſeeds are contained in ſpherical capſules, placed in the ſinuſes and folds of the leaves, and ſurrounded each with an elaſtic ring, which contracting burſts the capſule and ſcatters the minute ſeeds: beſides, as the the leaves of all the ſpecies of maidenhair have one general appearance, it is eaſy to diſtinguiſh them from other plants of the fern-kind. See plate VII. fig. 1.

Adiantum is greatly eſteemed as a pectoral, and gives name to a ſyrup, much uſed in that intention.

ADIAPHORISTS, or ADIAPHORITES, in church hiſtory, names given to the moderate Lutherans, in the ſixteenth century. The name imports lukewarmneſs, or indifference;



Fig. 1. ACUS.

Fig. 2. ACUS of OPPIAN.

Fig. 3. ADDERS-TONGUE.

Fig. 4. ADHATODA.

T. Jefferys sculp.

BRITISH MUSEUM

difference; being compounded of the privative α and διαφορος, different.

ADIAPHOROUS, an epithet given by Mr. Boyle to a ſpirit diſtilled from tartar and ſome other vegetable bodies; it is ſaid to be neither acid nor urinous, and in many reſpects different from any other ſpirit.

ADJECTIVE, in grammar, a word expreſſing ſome quality, or other accident, of the ſubſtantive with which it is joined: thus in the phraſe, pure gold, the word pure is an adjective, ſhewing the quality of the gold.

When the quality is the ſubject whereof we ſpeak it becomes a ſubſtantive: thus if I ſay, good is always to be choſen, the word good is a ſubſtantive; but in the phraſe, Peter is a good man, the word good is evidently an adjective, expreſſing the character of Peter.

ADIGE, a great river of Italy, which, taking its riſe in Tyrol, runs ſouthward by Trent, then eaſtward by Verona, and at laſt falls into the gulph of Venice northwards of the mouth of the river Po.

AD INQUIRENDUM, in law, a writ commanding inquiry to be made about ſomething connected with a cauſe depending in the king's courts; as of baſtardy for inſtance.

ADJOINING, in a general ſenſe, denotes the ſame with adjacent. See ADJACENT.

ADJOURNMENT, in law, the putting off a court, or meeting, to another time or place. Thus, adjournment *in eyre* is the appointment of a certain day, when the juſtices in eyre are to meet again.

Adjournments of parliament differ from prorogations, in being not only for a ſhorter time, but alſo in regard each houſe has the privilege of adjourning itſelf. See the article PROROGATION.

ADIPOSE, in a general ſenſe, denotes ſomething belonging to the fat of the body.

The term adipoſe is chiefly uſed by phyſicians and anatomiſts, in whoſe writings we read of adipoſe cells, adipoſe ducts, adipoſe membranes, adipoſe veſſels, &c.

ADIRBEITZAN, a province of Perſia, ſituated on the weſtern ſhore of the caſpian ſea: it makes part of the antient Media.

ADIT, *aditus*, in a general ſenſe, ſignifies the paſſage to, or entrance of any thing. Thus we read of an adit of a mine, adit of a theatre, adit of ſhips, &c. See the articles MINE, THEATRE, &c.

ADJUDGING, or ADJUDICATION, in law, the determining a cauſe in favour of a perſon. This term is, more particularly, uſed for the transferring the property of a thing ſold by auction to the higheſt bidder.

ADJUNCT, *adjunctum*, among philoſophers, ſomething added to another, to which it does not naturally belong: thus water in a ſponge, is an adjunct to it; ſo are clothes to a man.

Adjuncts are what we commonly call circumſtances, theſe, in ethics, are commonly reckoned ſeven, *quis*, *quid*, *ubi*, *quibus auxiliis*, *cur*, *quomodo*, *quando*.

ADJUNCTS, in rhetoric, a denomination given to all words added with a view to increaſe the force of the diſcourſe: ſuch are adjectives, attributes, epithets, &c.

ADJUNCT is alſo uſed for a colleague, or aſſiſtant. Thus,

Adjunct Gods, in heathen theology, were a kind of inferior deities, whoſe office it was to aſſiſt the ſuperior gods: ſuch were Mars, Bellona, and Nemeſis accounted.

ADJUNCTS, in the Paris academy of ſciences, are a ſet of members attached to the ſtudy of ſome particular ſcience. They are twelve in number; two for geometry, two for aſtronomy, two for anatomy, two for mechanics, two for chemiſtry, and two for botany. See the article ACADEMY.

ADJUNCTION, the act of joining ſeveral things together.

There are different kinds of adjunction; as by adheſion, oppoſition, impoſition, &c.

AD JURA REGIS, in law, a writ which lies for a clerk preſented to a living by the king, againſt thoſe who endeavour to eject him, to the prejudice of the king's title.

ADJURATION, that part of exorciſm which conſiſts in commanding the evil ſpirit, in the name of God, to depart out of the poſſeſſed perſon, or to anſwer ſome queſtion.

ADJUTAGE, or AJUTAGE, in hydraulics, the tube fitted to the mouth of a jet d'eau.

It is through the adjutage that water is played, and directed into any deſired figure; ſo that the great diverſity of fountains conſiſts chiefly in the different ſtructure of their adjutages. See FOUNTAIN.

ADJUTANT, in the military art, an officer whoſe buſineſs it is to aſſiſt the major, and therefore ſometimes called the aid major. See the article MAJOR.

Each battalion of foot, and regiment of horſe, has an adjutant, who receives the orders every night from the brigade-major; which, after carrying them to the colonel, he delivers out to the ſerjeants. When detachments are to be made, he gives the number to be furniſhed by each company, and aſſigns the hour and place

of rendezvous. He alſo places the guards, receives and diſtributes the ammunition to the companies; and, by the major's orders, regulates the price of bread, beer, &c. Adjutant is ſometimes uſed, by the French, for an aid de camp. See AID *de camp*.

ADJUTANTS *general*, among the jeſuits, a ſelect number of fathers, who reſide with the general of that order: they have each a province or country aſſigned them, as England, Germany, &c. and their buſineſs is to inform the father general of ſtate occurrences in ſuch countries.

ADJUTORIUM, among phyſicians, is uſed for a medicine preſcribed along with another more efficacious one; and, particularly, for an external application, after the proper uſe of internal medicines.

ADJUTORIUM, in anatomy, a name ſometimes given to the humerus, or ſhoulder-blade. See the article HUMERUS.

ADLE *eggs*, ſuch as have not been impregnated by the cock. See the article EGG.

ADLEGATION, *adlegatio*, in the cuſtoms of Germany, a right claimed by ſeveral princes of that empire, to ſend plenipotentiaries conjunctly with thoſe of the emperor, to all negociations wherein the empire in general is concerned.

The emperor diſputes this privilege of adlegation, to the princes of the empire; but allows them that of legation, or ſending ambaſſadors about their own private affairs. Hence adlegation differs from legation, which is the right of ſending ambaſſadors on a perſon's own account.

ADLOCUTION, *adlocutio*, in roman antiquity, ſignifies the ſpeech made by generals to their army, in order to rouze their courage before a battle.

ADMANUENSES, in our old law books, a term denoting laymen, who ſwore by laying their hands on the book: whereas the clergy were forbid to ſwear on the book, their word being deemed equal to an oath.

ADMEASUREMENT, in law, a writ for adjuſting the ſhares of ſomething to be divided. Thus, admeaſurement of dower takes place, when the widow of the deceaſed claims more as her dower than what of right belongs to her. And, admeaſurement of paſture may be obtained, when any of the perſons who have right in a common paſture, puts more cattle to feed on it than he ought.

ADMINICLE, *adminiculum*, in our old law books, is uſed for aid, help, or ſupport.

ADMINICLE, in the french juriſprudence, ſignifies the beginning or firſt ſketch of a proof.

ADMINICLES, among antiquarians, denote the attributes or ornaments wherewith Juno is repreſented on medals.

ADMINICULATOR, in church-hiſtory, an officer otherwiſe called advocate of the poor. See the article ADVOCATE.

ADMINISTRATION, in a political ſenſe, denotes, or ought to denote, the attendance of the truſtees of the people on public affairs; but, more particularly, adminiſtration is uſed for the executive part of the government, which is ſaid to be good or bad, according as the laws are duly enforced, and juſtice done the ſubjects. See the article GOVERNMENT.

ADMINISTRATION, in law, the office of an adminiſtrator. See ADMINISTRATOR. Whenever a man dies inteſtate, letters of adminiſtration are taken out in the prerogative court.

ADMINISTRATION is alſo uſed for the management of the affairs of a minor, lunatic, &c.

ADMINISTRATION, among eccleſiaſtical writers, denotes the power wherewith a parſon is inveſted; and that as well in regard to the temporalities of his cure, as to its ſpiritualities, *viz.* the power of excommunicating, of adminiſtring the ſacraments, &c.

ADMINISTRATION, among anatomiſts, denotes the art of properly diſſecting the parts of the human body, and particularly the muſcles.

ADMINISTRATION, in commerce, a regulation at Calao, a city of Peru, obliging all ſhips allowed to trade on the coaſt, to unload their european goods, and pay certain duties.

ADMINISTRATOR, in law, the perſon to whom the goods, effects, or eſtate of one who died inteſtate, are entruſted; for which he is to be accountable, when required.

The biſhop of the dioceſe where the party dies, is regularly to grant adminiſtration; but if the inteſtate has goods in ſeveral dioceſes, adminiſtration muſt be granted by the archbiſhop in the prerogative court. The perſons to whom adminiſtration is granted, are a huſband, wife, children, whether ſons or daughters, the father or mother, brother or ſiſter, and, in general, to the next of kin, as uncle, aunt, couſin; then to a creditor.

An action lies for and againſt an adminiſtrator, as for and againſt an executor; only that he is accountable no farther, than to the value of the goods.

ADMINISTRATOR is alſo uſed in ſeveral other ſenſes, as for an advocate of a church;

church; for a perſon appointed to receive and manage the revenues of an hoſpital or religious houſe; for a prince who enjoys the revenues of a ſecularizing biſhopric; and, laſtly, for the regent of a ſtate during a minority, or a vacancy of the throne: in this laſt ſenſe, we ſay, the adminiſtrator of Sweden, of Wirtemberg, *&c.*

ADMINISTRATIVE, properly denotes a power held in right of ſome other perſon or perſons.

ADMINISTRATRIX, a female, or woman who acts as adminiſtrator. See the article ADMINISTRATOR.

ADMIRAL, *admirallus* or *admiralius*, in maritime affairs, a great officer, who commands the naval forces of a kingdom or ſtate, and decides all maritime cauſes. There are ſeveral opinions with regard to the origin and denomination of this important officer, whom we find eſtabliſhed in moſt maritime kingdoms. Some will have it that both the name and dignity are derived from the Saracens; for Admiral, in the Arabian language, ſignifies a prince or chief ruler; and therefore the chief commander of the navy was called by this name, as a mark of dignity and honour. And it muſt be obſerved, in favour of this opinion, that there are no inſtances of admirals in this part of the world, before the year 1284, when Philip of France, who had attended St. Lewis to the wars againſt the Saracens, created an admiral. Others borrow it from the Greeks, the captain of the ſeas, under the emperor of Conſtantinople, being called ἀμηρᾶλιος, which is derived from ἅλμη, ſalt-water, and ἄρχος, chief; becauſe his juriſdiction lay on the ſea. But this officer was not inveſted with the ſupreme adminiſtration of naval affairs, being ſubordinate to the *dux magnus*, or grand general.—It is uncertain when the term was introduced among us, but the firſt mention of it is during the reign of Edward I.

Lord High ADMIRAL *of Great Britain*, called in ſome antient records, *Capitaneus Marinorum*, is judge, or preſident, of the court of admiralty. He has the management of all maritime affairs, and the government of the royal navy, with power of deciding in all maritime cauſes, both civil and criminal; he judges of all things done upon, or beyond the ſea, in any part of the world; upon the ſea-coaſts, in all ports and havens, and upon all rivers, below the firſt bridge, from the ſea. From him, vice-admirals, rear-admirals, and all other officers in the navy, receive their commiſſions: He alſo appoints the judges for his court of admiralty, and may impriſon, releaſe, *&c.* In ſhort, this is ſo great an office, with regard to truſt, honour, and profit, that it has uſually been given to princes of the blood, or the moſt eminent perſons among the nobility.

For ſome time paſt, we have had no lord high-admiral in Britain; that office being executed by a certain number of commiſſioners, called lords of the admiralty. See the article ADMIRALTY.

This term alſo denotes the commander in chief of a ſingle fleet or ſquadron; or, in general, any flag officer whatever.

In the britiſh navy, beſides the admiral who commands in chief, there are the vice-admiral who commands the ſecond ſquadron, and the rear-admiral, who commands the third ſquadron. The admiral carries his flag at the main-top-maſt-head; the vice-admiral at the fore-top-maſt-head; and the rear-admiral, at the mizen-top-maſt-head. See the article FLAG.

Vice-ADMIRAL likewiſe denotes an officer inveſted with the juriſdiction of an admiral, within a certain county or diſtrict.

There are upwards of twenty ſuch vice-admirals in Great-Britain; but an appeal lies from their ſentence, or determination, to the admiralty-court in London.

In France, the admiral is one of the great officers of the crown, general of the marine, and of all the naval forces of the kingdom. From him the captains and maſters of trading veſſels are obliged to take their licences, paſſports, commiſſions, and ſafe-conducts.

The tenth of all prizes belongs to him, and the whole of all fines adjudged in the courts of admiralty. He alſo has the duty of anchorage, tonnage, *&c.*

ADMIRAL is alſo an appellation given to the moſt conſiderable ſhip of a fleet of merchant-men, or the veſſels employed in the cod-fiſhery of Newfoundland.

This laſt has the privilege of chooſing what place he pleaſes on the ſandy ſhore, to dry his fiſh. He alſo gives proper orders, and appoints the fiſhing places to thoſe who come after him; and as long as the fiſhing-ſeaſon continues, he carries a flag on his main-maſt.

ADMIRAL, in conchyliology, the name of a beautiful ſhell of the voluta-kind, much admired by the curious. See VOLUTA.

There are four ſpecies of this ſhell, *viz.* the

the grand admiral, the vice-admiral, the orange-admiral, and the extra-admiral.

The firſt is extremely beautiful, of an elegant white enamel, variegated with bands of yellow, which repreſent, in ſome meaſure, the colours of the flags in men of war. It is of a very curious ſhape, and finely turned about the head, the clavicle being exerted; but its diſtinguiſhing character is a denticulated line, running along the center of the large yellow band: by this it is diſtinguiſhed from the vice-amiral, the head of which is alſo leſs elegantly formed. See plate VII. fig. 2. where A repreſents the admiral, B the vice-admiral.

The orange admiral has more yellow than any of the others, and the bands of the extra-admiral run into one another.

ADMIRALTY, properly ſignifies the office of lord high-admiral, whether diſcharged by one or ſeveral joint commiſſioners, called lords of the admiralty.

In Holland there are five admiralties, boards, or chambers, compoſed of the deputies of the nobles, the provinces, and towns, who have the care of fitting out fleets, and, in general, of all maritime affairs.

ADMIRALTY-*Court*, or court of admiralty, in the britiſh polity, a ſovereign court, held by the lord high-admiral, or the commiſſioners of the admiralty.

This court has cognizance in all maritime affairs, civil as well as criminal. All crimes committed on the high-ſeas, or in great rivers, beneath the bridge next the ſea, are cognizable only in this court; which, by ſtatute, is obliged to try the ſame by judge and jury. But in civil cauſes, it is otherwiſe, theſe being all determined according to the civil law; the reaſon whereof is, becauſe the ſea is without the juriſdiction of the common law.

In caſe any perſon be ſued in the admiralty court, contrary to the ſtatutes, he may have the writ of ſuperſedeas to ſtop farther proceedings, and alſo an action for double damages againſt the perſon ſuing.

Subordinate to this court, there is another of equity called court-merchant; wherein all cauſes between merchants are decided, agreeable to the rules of the civil law.

ADMIRATION, in a general ſenſe, ſignifies an expreſſion of wonder at ſome excellence; and ſometimes the aſtoniſhment, conceived at ſome extraordinary event.

Grammarians have a character for expreſſing this affection, or ſtate of mind, called a point of admiration, and marked thus (!).

ADMISSION, *admiſſio*, among eccleſiaſtical writers, denotes the act of a biſhop's admitting, or allowing a clerk to be able, or qualified for ſerving a cure.

This is done after examination, by pronouncing the formula *admitto te habilem*. If any perſon preſume to be admitted, who has not epiſcopal ordination, he ſhall forfeit 100*l*.

ADMITTENDO *clerico*, a writ granted to a perſon who has recovered his right of preſentation in the common pleas; by which the biſhop, or metropolitan, is ordained to admit his clerk. See the article ADMISSION.

ADMITTENDO *in ſocium*, a writ aſſociating certain perſons, uſually knights, and other gentlemen of the county, to the juſtices of aſſize already appointed.

ADMONITION, in church-hiſtory, a part of diſcipline, which conſiſts chiefly in warning an offender of the irregularities he is guilty of, and adviſing him to mend his manners.

By the antient canons, nine admonitions were required before excommunication. See the article EXCOMMUNICATION.

ADMONITIO *fuſtium*, among the Romans, a military puniſhment, not unlike our whipping, only that it was performed with vine branches.

ADMORTIZATION, in the feudal cuſtoms, the reducing the property of lands, or tenements to mortmain. See the article MORTMAIN,

ADNAME, among grammarians. See the article ADNOUN.

ADNASCENTIA, among gardeners. See the article ADNATA.

ADNATA, in anatomy, one of the tunics or coats of the eye, otherwiſe called conjunctiva and albuginea.

It is the ſame part with what is called the white of the eye, formed by the tendinous expanſions of the muſcles which move the eye. See the article EYE.

ADNATA, or ADNASCENTIA, among gardeners, terms uſed for ſuch off-ſets, as, by a new germination under the earth, proceed from the lilly, narciſſus, hyacinth, and other flowers; and afterwards grow to the roots. Theſe by the French are called *cayeux*.

ADNATA is alſo a term uſed for ſuch things as grow upon animal or vegetable bodies, whether inſeparably, as hair, wool, horns, &c. or accidentally, as the ſeveral epiſitical plants,

ADNOUN, or ADNAME, *adnomen*, terms ſometimes uſed to denote an adjective. See the article ADJECTIVE.

AD-OCTO, a phraſe uſed by antient philoſophers, importing the higheſt degree of perfection, by reaſon they reckoned none above the eighth.

ADOLESCENCE, *adoleſcentia*, the flower of a man's youth, commencing from his infancy, and terminating at his full ſtature or manhood.

This period of human life is commonly computed from fifteen to twenty-five years of age. Among the Romans, it was reckoned from twelve to twenty-five, in boys; and from twelve to twenty-one in girls.

ADONAI, one of the names of God uſed in the ſcriptures, and properly ſignifying *my lords*, in the plural, as adoni does *my lord*, in the ſingular number.

ADONIA, in antiquity, feſtivals kept in honour of Venus, and in memory of her beloved Adonis.

The adonia laſted two days, on the firſt of which the images of Venus and Adonis were carried with great ſolemnity, in manner of a funeral; the women crying all the while, tearing their hair, and beating their breaſts. On the ſecond, changing their note, they ſung his praiſes, and made rejoicings, as if Adonis had been raiſed to life again.

The adonia were celebrated by moſt antient nations, as Greeks, Egyptians, Syrians, Lycians, *&c.* The prophet Ezekiel, c. viii. ver. 14. is thought to mean theſe feſtivals.

ADONIC, in antient poetry, a kind of verſe conſiſting of a dactyle and ſpondee or trochee, marked thus —*vv* | —— or —*vv* | —*v*, as *ſtella refulſit*.

This kind of verſe had its name adonic, on account of its being originally uſed in the lamentations for Adonis. However, its principal uſe among poets, is to ſerve as a concluſion to each ſtrophe of ſaphic verſe.

ADONIDES, in botany, an appellation given to ſuch botaniſts as have given deſcriptions or catalogues of the plants cultivated in ſome particular place.

ADONIS, PHEASANT'S EYE, or RED MAITHS, in botany, a genus of the polyandria polygynia claſs of plants, the calyx of which is a perianthium compoſed of five obtuſe, hollow, ſomewhat coloured and deciduous leaves; the corolla conſiſts of five oblong obtuſe beautiful petals; and ſometimes there are more than five: there is no pericarpium; the receptacle is oblong, ſpicated, and holds five ſeries of ſeeds; the ſeeds are numerous, irregular and angular, gibbous at the baſe, and their apex reflex and prominent.

ADOPTIANI, in church hiſtory, a ſect of heretics, who maintained that Chriſt, with reſpect to his human nature, was not the natural, but adoptive ſon of God.

ADOPTION, *adoptio*, a ſolemn act, whereby one man makes another his heir; inveſting him with all the rights and privileges of a ſon.

Adoption was in frequent uſe among the Greeks and Romans, who had many regulations concerning it. The Lacedemonians, in order to prevent inconſiderate adoptions, had a law, that they ſhould be tranſacted, or at leaſt confirmed, before their kings; at Athens, ſlaves, madmen, and perſons under age, were incapable of adopting; and at Rome, adoptions were confirmed before the pretor, in an aſſembly of the people, or by a reſcript of the emperor.

Adoption, being chiefly deſigned for the comfort of thoſe who had no children of their own, was looked upon as a kind of imitation of nature. Accordingly, young men were not permitted to adopt their elders; on the contrary, it was neceſſary that the adopter ſhould be eighteen years older than his adopted ſon, to give an appearance of probability of his being the natural father.

Children, thus adopted, were inveſted with all the privileges, and obliged to perform all the duties of natural children, even to the aſſuming the names of the perſon who adopted them; and being thus provided for in another family, they ceaſed to have any claim of inheritance, or kindred, in the family they had left, unleſs they firſt renounced their adoption; which, by Solon's laws they were not permitted to do, till they had begotten children to bear the name of their adopted father.

On the other hand, the perſon who had once adopted children, was not permitted to marry afterwards, without expreſs leave from the magiſtrate; whom it was uſual to petition for ſuch a licence, in caſe the adopted children acted an ungrateful part.

Among the Romans, before adoption could take place, the natural father was obliged to renounce all authority over his ſon, and with great formality con-

ſent that he ſhould be tranſlated into the family of the adopter. The adoption of a perſon already free was called adrogation.

The ceremonies of adoption being various, have given riſe to a great many different kinds of it: thus, we read of adoption by teſtament, when a man adopted another by his laſt will; adoption by arms, or the preſenting the adopted ſon with a ſuit of armour; adoption by cutting off the hair; adoption by matrimony, or the adopting the children of a wife by a former huſband, *&c.*

ADOPTION, in a theological ſenſe, denotes an act of God's free grace, whereby thoſe who believe in Chriſt are accounted the children of God, and entitled to a ſhare in the inheritance of the kingdom of heaven.

ADOPTIVE, in a general ſenſe, ſignifies ſomething adopted. Thus, we ſay, adoptive children, an adoptive book, *&c.* This laſt is the title given by Menage to a book of elegies, or verſes addreſſed to him.

ADOPTIVE *arms*, in heraldry, thoſe enjoyed by the conceſſion of another, which the adopter is obliged to marſhal with his own, as being the condition of ſome honour or eſtate left him.

ADOPTIVE is ſometimes alſo uſed for borrowed or foreign: thus we ſay, adoptive hair, adoptive goods, *&c.*

Of adoptive hair, are made all manner of wigs, têtes, *&c.* at preſent in ſuch univerſal uſe.

Beſides their domeſtic gods, the Romans had a multitude of adopted ones, borrowed from foreign nations.

ADORATION, *adoratio*, denotes the act of worſhipping God, or a being ſuppoſed to be God.

The word comes from *ad*, to; and *os*, *oris*, the mouth, and imports, to kiſs the hand, this being univerſally acknowledged to be a mark of great reſpect.

Among the Jews, adoration conſiſted in kiſſing the hands, bowing, kneeling, and even proſtration. Hence, in their language, the word kiſſing is uſed for adoration. As to the ceremony of adoration among the Romans, it was performed with the head veiled, or covered; the devotee applying his right hand to his lips, the fore-finger reſting on the thumb, which was erect; and then bowing, he turned himſelf round from left to right. The Gauls, on the contrary, thought it more religious to turn from right to left; and the Greeks, to worſhip with their heads uncovered. The chriſtians follow the grecian rather than the roman mode, by uncovering when they perform any act of adoration.

Divines ſpeak of a great many kinds of adoration: thus, we read of ſupreme adoration, or that which is paid immediately to God; of ſubordinate adoration, rendered to inferior beings; of abſolute adoration, or that paid to a being on account of its own perfections: this is oppoſed to relative adoration, or that paid to an object, as belonging to, or repreſenting another.

ADORATION is alſo uſed, in a civil ſenſe, for any extraordinary homage or reſpect paid by one man to another.

The Perſians adored their kings, by falling proſtrate before them, ſtriking the earth with their fore-heads, and kiſſing the ground. This was a piece of ſervility, which Conon, a nobleman of Athens, refuſed to comply with, when introduced to Artaxerxes; neither would the philoſopher Caliſthenes perform it to Alexander the great, as judging it impious and unlawful.

The roman emperors were adored, by bowing or kneeling at their feet, laying hold of their purple robe, and immediately withdrawing the hand, and kiſſing it.

Adoration is more particularly uſed, for the ceremony of paying homage to the pope, by kiſſing his feet; which not only the people, but the greateſt prelates, and even princes make no ſcruple of performing. Proteſtants have hence taken occaſion, and not without reaſon, to charge the popes with exceſſive pride, and even impiety.

Adoration is ſtill more particularly uſed, for a method of electing a new pope, when the cardinals, inſtead of proceeding in the uſual way, unanimouſly fall down and adore one of their own number.

Adoration is the laſt ceremony of a regular election, but here it is the election itſelf, or rather ſuperſedes it.

Perpetual ADORATION, in the church of Rome, a kind of religious ſociety, frequent in the popiſh countries; which conſiſts of devout perſons, who, by regularly relieving each other, keep conſtantly praying before the euchariſt both day and night.

ADOREA, in roman antiquity, a word uſed in different ſenſes; ſometimes for all manner of grain; ſometimes for a kind

kind of cakes made of fine flour, and offered in ſacrifice; and, finally, for a doſe or diſtribution of corn, as a reward for ſome ſervice: whence, by metonymy, it is put for praiſe or rewards, in general.

ADOSCULATION, a term uſed by Grew for a kind of impregnation, effected by the external contact of the parts of generation, without intromiſſion. Such he ſuppoſes that of ſeveral birds and fiſh, as well as of plants, which is effected by the falling of the farina fœcundans on the piſtil.

ADOSSE'E, in heraldry, a term uſed for two rampant animals, placed back to back.

It alſo denotes any other figure, as axes, keys, *&c.* placed with their heads facing different ways.

ADOUR, the name of three rivers of France, in the province of Gaſcony; which, ariſing from different ſources, afterwards unite, and fall into the bay of Biſcay below Bayonne.

ADOXA, in botany, a genus of the octandria tetragynia claſs of plants, the corolla of which is plain, and conſiſts of a ſingle petal, divided into four oval acute ſegments, longer than the cup; the fruit is a globoſe berry, ſituated between the calyx and corolla; the calyx adheres to its under-part; the berry is umbilicated, and contains four cells; the ſeeds are ſingle and compreſſed. This is the fructification of the terminatory flower, the lateral ones all add a fifth to the number of the parts.

AD PONDUS OMNIUM, among phyſicians, denotes, that the laſt-mentioned ingredient ought to weigh as much as all the reſt put together.

ADQUISITUS, in antient muſic, a name given by the Romans to the note called by the Greeks *proſlambanomenos*.

AD QUOD DAMNUM, in law, a writ which ought to be iſſued before the king grants certain liberties, as a fair, market, or the like; ordering the ſheriff to enquire by the country what damage ſuch a grant is like to be attended with.

This writ is alſo iſſued, for making the ſame enquiry with reſpect to lands granted to religious houſes, or corporations; for turning and changing of highways, *&c.*

ADRACANTH, the ſame with tragacanth. See the article TRAGACANTH.

ADRESS, or ADDRESS. See ADDRESS.

ADRIA, a ſmall town of Italy, about twenty-ſix miles ſouth of Venice, formerly a biſhop's ſee, which is now tranſlated to Rovigo.

It was from this town that the adriatic ſea, or gulph of Venice, took its name.

ADRIANOPLE, a great and populous city of Turkey in Europe, ſituated in a fine plain, on the river Marizam, about 150 miles N. W. of Conſtantinople. It is eight miles in circumference, and frequently honoured with the grand ſignior's preſence. Eaſt longitude 26° 30′. N. latitude 42°.

ADRIATIC *ſea*, the ſame with the gulph of Venice, being a very conſiderable branch or part of the Mediterranean, reaching from Otranto to Venice, and waſhing the northern coaſt of Italy.

ADROGATION, in antiquity, that kind of adoption, which took place in regard to a perſon already his own maſter. See the article ADOPTION.

It was ſo called on account of a queſtion put to both the parties; to the adopter, whether he would take ſuch a perſon for his ſon; and to the adopted, whether he conſented to become ſuch a perſon's ſon?

ADSCRIPTS, a term uſed by ſome mathematicians for the natural tangents. See the article TANGENT.

ADSIDELA, in antiquity, the table at which the flamens ſat during the ſacrifices. See the article SACRIFICE.

ADSTRICTION, among phyſicians, is uſed to denote the too great rigidity and cloſeneſs of the emunctories of the body, particularly the pores of the ſkin: alſo for the ſtyptic quality of medicines. See the article ASTRINGENTS.

AD TERMINUM *qui præteriit*, in law, a writ of entry, that lies for the leſſor or his heirs, if after the expiration of a term for life or years, granted by leaſe, the tenant or other occupier of the lands, *&c.* with-holds the ſame from ſuch leſſor.

ADVANCE, in the mercantile ſtile, denotes money paid before goods are delivered, work done, or buſineſs performed. To pay a note of hand, or bill, by advance, is to pay the value before it becomes due; in which caſe it is uſual to allow a diſcount for the time it is pre-advanced.

ADVANCED, in a general ſenſe, denotes ſomething poſted or ſituated before another: Thus, advanced ditch, or moat, in fortification, is that drawn round the glacis or eſplanade of a place. See MOAT.

ADVANCED-*guard*, or VANGUARD, in the art of war, denotes the firſt line or diviſion of an army, ranged, or marching in order of battle; or it is that part which is next the enemy, and marches firſt towards them. See the article ARMY.

Advanced-guard is more particularly uſed for a ſmall party of horſe ſtationed before the main-guard. See the article GUARD.

ADVANCER, among ſportſmen, denotes one of the ſtarts, or branches of a buck's attire, between the back antler, and the palm.

ADUAR, in the arabian and mooriſh cuſtoms, a kind of ambulatory village, conſiſting of tents; which theſe people remove from one place to another, as ſuits their conveniency.

ADVENT, in the calendar, denotes the time immediately preceding Chriſtmas. It includes four ſundays, or weeks, which begin either on St. Andrew's day, or on the ſunday before or after it.

The term advent, *adventus*, properly ſignifies the approach or coming on of the feaſt of the nativity. See NATIVITY.

During advent, and to the end of the octaves of epiphany, the ſolemnizing of marriage is forbid, without a ſpecial licence. See the article MARRIAGE.

ADVENTITIOUS, an appellation given to whatever accrues to a perſon or thing from without. Such are ſparry incruſtations upon wood, *&c.*

ADVENTITIOUS, among civilians, denotes all ſuch goods as are acquired accidentally, or by the liberality of a ſtranger, *&c.*

ADVENTITIOUS *foſſils*, the ſame with extraneous or foreign ones, found imbodied in other foſſils; ſuch are ſhells, bones, *&c.* in ſtone.

AD VENTREM *inſpiciendum*, in law, a writ by which a woman is to be ſearched whether ſhe be with child by a former huſband, on her with-holding of lands from the heir.

ADVENTURE, in a general ſenſe, denotes ſome extraordinary event, eſpecially ſuch as falls out caſually.

ADVENTURE alſo denotes a hazardous, or difficult undertaking, the ſucceſs whereof depends on ſomething not in the power, or under the controul of the adventurer; in which ſenſe, ſending goods to ſea, fighting a battle, *&c.* are great adventures.

Bill of ADVENTURE, among merchants, a writing ſigned by a merchant, teſtifying that the goods mentioned in it to be ſhipped on board a certain veſſel, belong to another perſon, who is to run all hazards; the merchant only obliging himſelf to account to him for the produce of them, be what it will.

ADVENTURER, in a general ſenſe, denotes one who hazards ſomething. See the article ADVENTURE.

By ſtatute 13 Geo. II. c. 4. adventurers may obtain a charter for whatever ſettlements in America they ſhall take from the enemy.

ADVENTURERS, or *merchant*-ADVENTURERS, a company of merchants erected for the diſcovery of lands, trades, *&c.* See the article COMPANY.

ADVERB, *adverbium*, in grammar, a word joined to verbs, expreſſing the manner, time, *&c.* of an action: thus, in the phraſe, *it is conducive to health to riſe early*, the word *early* is an adverb: and ſo of others.

Adverbs are alſo added to nouns, and even to other adverbs, in order to modify, or aſcertain their meaning; whence ſome grammarians call them modifications: thus, in the phraſe, *be prayed very devoutly*, the word *devoutly* qualifies the action of prayer, and the word *very* does the ſame in regard to devoutly.

Adverbs, though very numerous, may be reduced to certain claſſes; the principal of which are thoſe of order, of place, of time, of quantity, of quality, of manner, of affirmation, doubting, compariſon, interrogation, diminution, *&c.*

ADVERBIAL, ſomething belonging to adverbs: thus we ſay, an adverbial phraſe, number, *&c.* See ADVERB.

Thus, over againſt, by way of, *&c.* are adverbial expreſſions; and once, twice, thrice, *&c.* adverbial numbers.

ADVERSARIA, among the antients, was a book of accounts, not unlike our journals, or day-books.

ADVERSARIA is more particularly uſed, among men of letters, for a kind of common-place-book, wherein they enter whatever occurs to them worthy of notice, whether in reading or converſation, in the order in which it occurs: a method which Morhof prefers to that of digeſting them under certain heads. See the article BOOK.

Adverſaria is alſo uſed for books containing various obſervations, remarks, *&c.* or even a commentary upon ſome author or writing.

ADVERSARY denotes a perſon who is an enemy to, or oppoſes another.

Adverſary, in a law ſenſe, is uſed indifferently for either of the contending parties, conſidered as oppoſing the other.

ADVERSATIVE, in grammar, a word expreſſing ſome difference between what goes before and what follows it. Thus, in

in the phraſe, *he loves knowledge but has no application*, the word *but* is an adverſative conjunction; between which and a disjunctive one there is this difference, that the firſt ſenſe may hold good without the ſecond oppoſed to it, which is otherwiſe in regard to disjunctive conjunctions. See the article DISJUNCTIVE.

ADVERSATOR, in antiquity, a ſervant who attended the rich in returning from ſupper, to give them notice of any obſtacles in the way, at which they might be apt to ſtumble.

ADVERTISEMENT, in a general ſenſe, denotes any information given to perſons intereſted in an affair.

ADVERTISEMENT is more particularly uſed for a brief account of an affair inſerted in the daily or other public papers, for the information of all concerned, or who may find ſome advantage from it.

Advertiſements of this kind are certainly of great uſe to the public. Traders, ſhipmaſters, companies, and every man, of what rank or condition ſoever, find their advantage in them. Nay, as the beſt things are capable of being abuſed, even ſharpers, quacks, and a long *&c.* of deſigning rogues make uſe of them to impoſe upon the credulous and unwary.

ADVICE, or *letter of* ADVICE, a letter miſſive, by which a merchant, or banker, informs his correſpondent, that he has drawn a bill of exchange, that his debtors affairs are in a bad ſtate, or that he has ſent a quantity of merchandize, whereof the invoice is uſually annexed. See the article INVOICE.

A letter of advice for the payment of a bill of exchange ſhould mention the name of the perſon for whoſe account it is drawn, the day, month, and year; the ſum drawn for; the name of him from whom the value is received; and the perſon's name to whom it is payable.

For want of ſuch advice, it is very allowable to refuſe accepting a bill of exchange.

ADULT, in a general ſenſe, an appellation given to any thing arrived at maturity: thus we ſay an adult perſon, an adult plant, *&c.*

ADULT, among civilians, denotes a youth between fourteen and twenty-five years of age.

ADULTERATION, in a general ſenſe, denotes the act of debaſing, by an improper mixture, ſomething that was pure and genuine. Thus, adulteration of coin, is the caſting or making it of a metal inferior in goodneſs to the ſtandard, by uſing too great a proportion of alloy. This is a crime which all nations have made capital.

ADULTERATION, in pharmacy, is the uſing ingredients of leſs virtue in medicinal compoſitions, to ſave expence; a practice with which the dealers in medicines and drugs are but too well acquainted.

ADULTERATION, among diſtillers, vintners, *&c.* is the debaſing of brandies or wines, by mixing them with ſome improper liquor.

By ſtat. 1 W. & M. c. 34. whoever ſells adulterated wine, is to forfeit three hundred pounds.

ADULTERER, denotes a man who is guilty of adultery. See ADULTERY.

ADULTERESS, a female adulterer, or woman who commits adultery.

ADULTERINE, in a general ſenſe, denotes any thing which has been adulterated. See the article ADULTERATION.

Adulterine children, among civilians, thoſe ſprung from an adulterous amour.

Adulterine is alſo uſed for any thing that is ſpurious, falſe, or counterfeited: thus we ſay adulterine writings, balance, key, coins, *&c.*

ADULTERY, the crime of married perſons, whether huſband or wife, who, in violation of their marriage vow, have carnal commerce with another, beſides thoſe to whom their faith has been plighted.

By the law of Moſes, both man and woman, who had been guilty of adultery, were put to death.

The antient Romans had no formal law againſt adultery; Auguſtus being the firſt who made it puniſhable by baniſhment, and in ſome caſes by death. However, by an edict of Antoninus, a huſband could not proſecute his wife for adultery, unleſs he was innocent himſelf. And by the regulations of Juſtinian, at the inſtance of his wife Theodora, the puniſhment of adultery in the woman was mitigated; whipping, and ſhutting up in a convent for two years, being deemed ſufficient, during which time, if the huſband did not take back his wife, ſhe was ſhut up for life.

Among the Greeks, adultery was puniſhed variouſly; ſometimes by fine, and at others by what they called *paratilmus*: nay, the Lacedemonians are even ſaid to have permitted it.

Adultery among European nations, is reckoned a private crime, none but the huſband being ſuffered to intermeddle in the

the affair; and what is no less remarkable, though the husband be guilty of adultery, the wife is not allowed to prosecute him for the same.

In England, adultery is accounted a spiritual offence, and therefore the injured party can have no other redress but to bring an action of damages against the adulterer; and to divorce and strip the adultress of her dower, is all the punishment she incurs. And, indeed, it must be owned, that the laying a heavy fine upon the man, and punishing the woman in the manner just mentioned, is as likely, if not more so, to prevent the frequency of adultery, as more severe methods.

Authors have established several distinct species or kinds of this crime: thus, manifest adultery is when the parties are caught in the fact; secret adultery, when the knowledge of it is kept concealed from the world; presumptive adultery, when the parties are found in bed together; single adultery, when one of the parties is not married: and so of other cases.

ADULTERY is also used for any kind of unchastity; in which sense, divines understand the seventh commandment.

ADULTERY, in the scripture-language, is likewise used for idolatry, or the forsaking the worship of the true God for that of a false one.

ADVOCATE, *advocatus*, among the Romans, a person who undertook the defence of causes, which he pleaded much in the same manner as our barristers do at present.

Advocates were held in great honour, during the first ages of the roman commonwealth, being stiled *comites*, *honorati*, *clarissimi*, and even *patroni*.

The term advocate is still kept up in all countries where the civil law obtains. In Scotland there is a college of advocates, consisting of one hundred and eighty persons, appointed to plead in all actions before the lords of session.

In France there are two kinds of advocates, or those who plead, and those who only give their opinions, like our chamber counsellors.

Lord-ADVOCATE, one of the officers of state in Scotland, who pleads in all causes of the crown, or wherein the king is concerned.

The lord advocate sometimes happens to be one of the lords of session; in which case, he only pleads in the king's causes.

Fiscal ADVOCATE, *fisci advocatus*, in roman antiquity, an officer of state under the roman emperors, who pleaded in all causes wherein the *fiscus*, or private treasury, was concerned.

Consistorial ADVOCATES, officers of the consistory at Rome, who plead in all oppositions to the disposal of benefices in that court: they are ten in number.

ADVOCATE *of a city*, in the german polity, a magistrate appointed, in the emperor's name, to administer justice.

ADVOCATE, among ecclesiastical writers, a person who undertakes the defence of a church, monastery, *&c.*

Of these there were several kinds, as elective advocates, or those chosen by the chapter, bishop, abbot, *&c.* nominative advocates, or those appointed by the emperor, pope, *&c.* military advocates, those who undertook the defence of the church rather by arms than eloquence, *&c.* There were also feudal advocates, supreme and subordinate advocates; and matricular advocates, or those of the mother or cathedral church.

ADVOCATION, among civilians, the act of calling another to assist us by pleading some cause.

Letters of ADVOCATION, in the law of Scotland, a writ issued by the lords of session, advocating, or calling, a cause from an incompetent judge to themselves.

ADVOCATIONE *decimarum*, a writ which lies for claiming a fourth part of tithes, or upwards, belonging to any church.

ADVOW, in law. See AVOWRY.

ADVOWEE, in law, signifies the patron of a church, or he who has a right to present to a benefice.

Paramount ADVOWEE, is used for the king, as being the highest patron.

ADVOWEE also denotes the defender of the rights of a church; in which sense it amounts to the same with advocate. See the article ADVOCATE.

ADVOWING, or AVOWRY. See the article AVOWRY.

ADVOWSON, in a general sense, denotes the office or employment of an advowee. See the article ADVOWEE.

ADVOWSON, in law, is the right of patronage, or presenting to a vacant benefice. See the article PATRONAGE.

Advowsons are either appendant, or in gross. Appendant advowsons, are those which depend on a manor, or lands, and pass as appurtenances of the same: whereas advowson in gross, is a right of presentation

ſentation ſubſiſting by itſelf, belonging to a perſon, and not to lands.

In either caſe, advowſons are no leſs the property of the patrons than their landed eſtate: accordingly they may be granted away by deed or will, and are aſſets in the hands of executors. However, papiſts and jews, ſeized of any advowſons, are diſabled from preſenting: the right of preſentation being in this caſe transferred to the chancellors of the univerſities, or the biſhop of the dioceſe.

ADVOWTRY, a term uſed in ſome old law-books for adultery. See the article ADULTERY.

ADUST, among phyſicians, an appellation given to ſuch humours as are become of a hot and fiery nature. Thus blood is ſaid to be aduſt, when, the more ſubtle and volatile part being evaporated, the remainder is vapid and impure.

ADUSTION, among phyſicians, is uſed for an inflammation of the parts about the brain and its membranes, attended with hollowneſs of the ſinciput and eyes, a pale colour, and drineſs of the body: in which caſe, the yolk of an egg, with oil of roſes, applied by way of cataplaſm, is recommended; as are the leaves of turnſol, the parings of a gourd, the pulp of a pompion, applied in the ſame manner, with oil of roſes.

ADY, in botany, the name of a ſpecies of palm-tree, found in the iſland of St. Thomas; the fruit of which is of the ſize and ſhape of a lemon, and contains an aromatic kernel, from whence an oil is prepared that anſwers the end of butter in Europe.

The Portugueſe call the fruit *caryoces* and *carioſſe*, and eſteem the kernels as a good cordial.

ADYTUM, ἄδυτον, in pagan antiquity, the moſt retired and ſecret place of their temples, into which none but the prieſts were allowed to enter.

The term is purely Greek, ſignifying inacceſſible.

The adytum of the heathens anſwered to the ſanctum ſanctorum of the Jews, and was the place from whence they delivered oracles.

ADZE, a kind of ax, otherwiſe called addice. See the article ADDICE.

AE, Æ, among grammarians, a diphthong or double vowel, compounded of A and E.

The orthography of this diphthong is far from being fixed, the ſimple E frequently ſupplying its place. When, therefore, an article cannot be found under the Æ, the reader is to look for it under E: though the references for the moſt part, will be a faithful guide in caſes of this nature.

ÆACEA, in grecian antiquity, ſolemn feſtivals and games celebrated at Ægina, in honour of Æacus; who, on account of his juſtice upon earth, was thought to have been appointed one of the judges in hell.

ÆCHMALOTARCHA, ἀιχμαλωτάρχης, in jewiſh antiquity, the title given to the principal leader or governor of the hebrew captives reſiding in Chaldæa, Aſſyria, and the neighbouring countries.

The Jews themſelves call this magiſtrate *Roſch-galuth*, *i. e.* chief of the captivity. Baſnage aſſures us, that there was no æchmalotarch before the end of the ſecond century: and Prideaux ſays, that the æchmalotarch, at preſent, is only the head of their religion, like the *epiſcopus Judæorum* in England, the altarch at Alexandria, and the ethnarch at Antioch.

ÆDES, in roman antiquity, beſides its more ordinary ſignification of a houſe, or the internal part of a houſe, where the family uſed to eat, likewiſe ſignified an inferior kind of temple, conſecrated indeed to ſome deity, but not by the augurs.

There were a vaſt number of theſe in antient Rome: thus we read of the *ædes fortunæ*, *ædes pacis*, *ædes Herculis*, &c.

ÆDILE, *ædilis*, in roman antiquity, a magiſtrate whoſe chief buſineſs was to ſuperintend buildings of all kinds, but more eſpecially public ones, as temples, aquæducts, bridges, &c.

To the ædiles likewiſe belonged the care of the highways, public places, weights and meaſures, &c. They alſo fixed the prices of proviſions, took cognizance of debauches, puniſhed lewd women, and ſuch perſons as frequented gaming-houſes. The cuſtody of the plebiſcita, or orders of the people, was likewiſe committed to them. They had the inſpection of comedies, and other pieces of wit; and were obliged to exhibit magnificent games to the people, at their own expence, whereby many of them were ruined.

At firſt the ædiles were only two in number, and choſen from among the common people; but theſe being unable to ſupport the expence of the public ſhews, two more were created out of the patrician order: theſe laſt took upon themſelves all the

the charges of the games, and were called *ædiles curules*, or *majores*, as the two plebeians were denominated *minores*.

Julius Cæsar, in order to ease these four, created two others, who were called *ædiles cereales*, as having the inspection of all manner of grain committed to their care.

There were also ædiles in the municipal cities, who had much the same authority as those in Rome.

ÆDILITIAN *edict*, *ædilitium edictum*, among the Romans, was particularly used for the ædile's sentence, allowing redress to the purchaser of a beast or slave, that had been imposed on.

ÆDITUUS, in roman antiquity, an officer belonging to temples, who had the charge of the offerings, treasure, and sacred utensils.

The female deities had a woman-officer of this kind called ÆDITUA.

ÆGAGROPILA, or ÆGAGROPILUS, αιγαγροπιλος, in natural history, a ball composed of a substance resembling hair, generated in the stomach of the chamois-goat.

It is a kind of bezoard, called *bezoar germanicum*, and is possessed of no medicinal virtue, no more than the balls of the same kind formed in the stomachs of cows, hogs, &c. See the article BEZOAR.

ÆGILOPS, αιγιλωψ, among physicians, an abscess in the corner of the eye, next the nose; or, according to Heister, a small tumour caused by an inflammation or abscess, which in time, by the acrimony of its purulent matter, erodes the external skin, lacrymal ducts, and fat round the ball of the eye; nay, sometimes it renders the neighbouring bones carious to a dangerous degree.

As to the method of treatment, the surgeon is first to endeavour to disperse the tumour, by moistening it several times a day with spirit of vitriol; but if he finds this impracticable, he is to forward the suppuration as much as possible, lest an obstinate fistula, or worse consequences, should be the effects of too long delay. For this purpose, a plaster of diachylon with the gums, or emollient cataplasms may be used.

When fully ripe, the tumour is to be laid open with a lancet or scalpel, and the ulcer cleansed and healed in the ordinary way. See the article ULCER.

ÆGILOPS, in botany, a genus of the *polygamia-monoecia* class of plants; the corolla of the hermaphrodite flower consists of a bivalve glume, terminated by a double or triple arista or awn; the seed is single and oblong; the corolla of the male flower is also a bivalve aristated glume, as in the hermaphrodite flower.

ÆGINETIA, in botany, a genus of the didynamia angiospermia class of plants, the flower of which consists of one leaf, large, round, and inflated at the base; the tube is short and cylindric; and the mouth small, but expanded and turning back at the edges.

ÆGIPAN, in heathen mythology, a denomination given to the god Pan, by reason he was represented with the horns, legs, feet, &c. of a goat.

Egipan is also the name of certain monsters, the upper part of whose bodies resembled a goat, and their lower part a fish's tail.

ÆGIS, in heathen mythology, is particularly used for the shield or cuirass of Jupiter and Pallas.

Ægis is derived from αιξ, αιγος, a she-goat; Jupiter having covered his shield with the skin of Amalthea, the goat that suckled him. Afterwards making a present of the buckler to Minerva, this goddess fixed the head of Medusa on the middle of it, which, by that means, became capable of turning all those into stone who looked at it.

ÆGOPODIUM, GOUT-WEED, in botany, a genus of the *pentandria digynia* class of plants; the general corolla whereof is uniform; the single flowers consist each of five, oval, concave, and nearly equal petals; the fruit is naked, ovato-oblong, striated, and separable into two parts; the seeds are two, ovato-oblong and striated, convex on one side, and plain on the other.

ÆGYPTIACUM, in pharmacy, the name of several detergent ointments, used for eating off rotten flesh, and cleansing foul ulcers.

The ægyptiacum, as ordered in the Edinburgh dispensatory, is a composition of verdigrease, reduced to fine powder, five ounces; of honey, fourteen ounces; of vinegar, seven ounces: all which are to be boiled over a gentle fire, to the consistence of an unguent.

It is an admirable cleanser, and much recommended by surgeons to keep down fungous excrescences, and eat off raw flesh; only that the ægyptiacum of the London dispensatory is thought to be too corrosive.

ÆLURUS, in egyptian mythology, the deity or god of cats; represented sometimes

times like a cat, and at others, like a man with a cat's head.

ÆNIGMA, αἴνιγμα, denotes any dark saying or queſtion, wherein ſome well-known thing is concealed under obſcure language. The parable, gryphus, and rebus are by ſome accounted three ſpecies, or branches, of ænigma. See the articles PARABLE, GRYPHUS, and REBUS.

To compoſe an ænigma, two things are to be choſen which bear ſome reſemblance to each other, as the ſun and a monarch, a ſhip and a houſe, a bed and the grave, &c. on which ſome perplexing and intricate queſtion, deſcription, or proſopopæia is to be made. This laſt is moſt pleaſing, in as much as it gives life and action to things void of them: ſuch is that famous one of the chemiſts, called the Sybelline Ænigma, and ſuppoſed by ſome to ſignify the name Jehovah, by others the word phoſphorus, but by the generality the word arſenic, Ἀρσενικον.

Ἐμὰ γράμματ' ἔχω, τετρασύλλαϐός εἰμι, νόεμμαι.
Αἱ τρεῖς αἱ πρῶται δυὸ γράμματ' ἔχουσιν ἑκάςη,
Ἡ λοιπὴ δὲ τὰ λοιπὰ, καὶ ἐστὶν ἄφωνα τὰ πάντα.
Τὸ παντὸς δ' ἀριθμῶ ἑκατοντάδες εἰσὶ δὶς ἑπτὰ,
Καὶ τρεῖς τρὶς δεκάδες καὶ δὶς τρεῖς. Τνῦς δὲ τίς εἰμι,
Οὐκ ἀμύητος ἔσῃ τῦς παρ' ἐμοῦ σοφίης.

Thus tranſlated by Mr. Leibnitz.

Literulis noſcor, quadriſyllabus ipſe, novenis:
Syllaba habet binas, niſi quod tenet ultima ternas:
Vocales quatuor, quinis non propria vox eſt.
Bis ſeptem vicibus numerum centuria totum.
Ingreditur, decadeſque novem, tum bis tria. Si me
Noveris, hinc aditus ad ſacra noſtra patent.

Painted ænigmas are repreſentations of ſome objects, whether of nature or art, concealed under the human figure. See the next article.

F. Meneſtrier has attempted to reduce the compoſition and reſolution of Ænigma's to a kind of art, with fixed rules, and principles, which he calls the philoſophy of ænigmatic images.

ÆNIGMATICAL, denotes ſomething belonging to, or partaking of the nature of an ænigma. See the laſt article.

The antient ſages in general affected an ænigmatical way of writing, to conceal their doctrines from the populace. The Romans in Nero's time were obliged to have recourſe to the like method, though for different reaſons. The ænigmatical characters of the Egyptians were a ſpecies of hieroglyphics, conſiſting of ſuch as bore no natural reſemblance to the things they repreſented. Such was the beetle, uſed to expreſs the ſun; the ſerpent, to repreſent the ſtars.—Among the divers ſpecies of revelation, enumerated by divines, there is one called the ænigmatical. Vander Hard maintains at large, that the whole book of Jonah is ænigmatical, particularly, that by the prophet himſelf, is to be underſtood the jewiſh nation; by his being caſt into the ſea in a ſtorm, and ſwallowed by a whale, the Jews being carried into captivity; by his prayer in the fiſh's belly, the Jewiſh exiles ſupplications in their captivity; by the fiſh's vomiting him up, their return into their own country, &c.

ÆOLIC, in a general ſenſe, denotes ſomething belonging to Æolia, or Æolis.

Æolic dialect, among grammarians, one of the five dialects of the greek tongue, agreeing in moſt things with the doric dialect. See the article DORIC.

Æolic verſe, in proſody, a kind of verſe, conſiſting of an iambus, or ſpondee, then of two anapeſts, ſeparated by a long ſyllable, and laſtly, of another ſyllable. Such is,

O ſtelliferi conditor orbis,

ÆOLIPILE, *æolipila*, a hollow metalline ball, in which is inſerted a ſlender neck, or pipe; from whence, after the veſſel has been partly filled with water, and heated, iſſues a blaſt of wind with great vehemence.

Great care ſhould be taken that the aperture of the pipe be not ſtopped when the inſtrument is put on the fire, otherwiſe the æolipile will burſt with a vaſt exploſion, and may occaſion no little miſchief.

As to the phænomena of the æolipile, they may be accounted for from the rarefaction of the water. See RAREFACTION.

Dr. Plot gives an inſtance where the æolipile is actually uſed to blow the fire: the lord of the manor of Eſſington, is bound by his tenure to drive a gooſe every New-year's-day three times round the hall of the lord of Hilton, while Jack of Hilton (a brazen figure having the ſtructure of an æolipile) blows the fire. In Italy it is ſaid, that the æolipile is commonly made uſe of to cure ſmoaky chimneys: for being hung over the fire, the blaſt ariſing from it carries up the loitering ſmoak along with it.

F. Merſennus, and ſome others, have made uſe of this machine, to meaſure the gravity and degree of rarefaction of the air.

the charges of the games, and were called *ædiles curules*, or *majores*, as the two plebeians were denominated *minores*.

Julius Cæsar, in order to ease these four, created two others, who were called *ædiles cereales*, as having the inspection of all manner of grain committed to their care.

There were also ædiles in the municipal cities, who had much the same authority as those in Rome.

ÆDILITIAN *edict*, *ædilitium edictum*, among the Romans, was particularly used for the ædile's sentence, allowing redress to the purchaser of a beast or slave, that had been imposed on.

ÆDITUUS, in roman antiquity, an officer belonging to temples, who had the charge of the offerings, treasure, and sacred utensils.

The female deities had a woman-officer of this kind called ÆDITUA.

ÆGAGROPILA, or ÆGAGROPILUS, αιγαγροπιλος, in natural history, a ball composed of a substance resembling hair, generated in the stomach of the chamois-goat.

It is a kind of bezoard, called *bezoar germanicum*, and is possessed of no medicinal virtue, no more than the balls of the same kind formed in the stomachs of cows, hogs, &c. See the article BEZOAR.

ÆGILOPS, αιγιλωψ, among physicians, an abscess in the corner of the eye, next the nose; or, according to Heister, a small tumour caused by an inflammation or abscess, which in time, by the acrimony of its purulent matter, erodes the external skin, lacrymal ducts, and fat round the ball of the eye; nay, sometimes it renders the neighbouring bones carious to a dangerous degree.

As to the method of treatment, the surgeon is first to endeavour to disperse the tumour, by moistening it several times a day with spirit of vitriol; but if he finds this impracticable, he is to forward the suppuration as much as possible, lest an obstinate fistula, or worse consequences, should be the effects of too long delay. For this purpose, a plaster of diachylon with the gums, or emollient cataplasms may be used.

When fully ripe, the tumour is to be laid open with a lancet or scalpel, and the ulcer cleansed and healed in the ordinary way. See the article ULCER.

ÆGILOPS, in botany, a genus of the *polygamia-monoecia* class of plants; the corolla of the hermaphrodite flower consists of a bivalve glume, terminated by a double or triple arista or awn; the seed is single and oblong; the corolla of the male flower is also a bivalve aristated glume, as in the hermaphrodite flower.

ÆGINETIA, in botany, a genus of the didynamia angiospermia class of plants, the flower of which consists of one leaf, large, round, and inflated at the base; the tube is short and cylindric; and the mouth small, but expanded and turning back at the edges.

ÆGIPAN, in heathen mythology, a denomination given to the god Pan, by reason he was represented with the horns, legs, feet, &c. of a goat.

Egipan is also the name of certain monsters, the upper part of whose bodies resembled a goat, and their lower part a fish's tail.

ÆGIS, in heathen mythology, is particularly used for the shield or cuiras of Jupiter and Pallas.

Ægis is derived from αιξ, αιγος, a she-goat; Jupiter having covered his shield with the skin of Amalthea, the goat that suckled him. Afterwards making a present of the buckler to Minerva, this goddess fixed the head of Medusa on the middle of it, which, by that means, became capable of turning all those into stone who looked at it.

ÆGOPODIUM, GOUT-WEED, in botany, a genus of the *pentandria digynia* class of plants; the general corolla whereof is uniform; the single flowers consist each of five, oval, concave, and nearly equal petals; the fruit is naked, ovato-oblong, striated, and separable into two parts; the seeds are two, ovato-oblong and striated, convex on one side, and plain on the other.

ÆGYPTIACUM, in pharmacy, the name of several detergent ointments, used for eating off rotten flesh, and cleansing foul ulcers.

The ægyptiacum, as ordered in the Edinburgh dispensatory, is a composition of verdigrease, reduced to fine powder, five ounces; of honey, fourteen ounces; of vinegar, seven ounces: all which are to be boiled over a gentle fire, to the consistence of an unguent.

It is an admirable cleanser, and much recommended by surgeons to keep down fungous excrescences, and eat off raw flesh; only that the ægyptiacum of the London dispensatory is thought to be too corrosive.

ÆLURUS, in egyptian mythology, the deity or god of cats; represented sometimes

times like a cat, and at others, like a man with a cat's head.

ÆNIGMA, αἴνιγμα, denotes any dark saying or queſtion, wherein ſome well-known thing is concealed under obſcure language. The parable, gryphus, and rebus are by ſome accounted three ſpecies, or branches, of ænigma. See the articles PARABLE, GRYPHUS, and REBUS.

To compoſe an ænigma, two things are to be choſen which bear ſome reſemblance to each other, as the ſun and a monarch, a ſhip and a houſe, a bed and the grave, &c. on which ſome perplexing and intricate queſtion, deſcription, or proſopopæia is to be made. This laſt is moſt pleaſing, in as much as it gives life and action to things void of them: ſuch is that famous one of the chemiſts, called the Sybelline Ænigma, and ſuppoſed by ſome to ſignify the name Jehovah, by others the word phoſphorus, but by the generality the word arſenic, Ἀρσενικον.

Ἐνιὰ γράμματ' ἔχω, τετρασύλλαβός εἰμι, νέεσσι.
Αἱ τρεῖς εἰ πρῶται δυὸ γράμματ' ἔχουσιν ἑκάστη,
Ἡ λοιπὴ δὲ τὰ λοιπὰ, καὶ ἐστὶν ἄφωνα τὰ πάντα.
Τὸ παντὸς δ' ἀριθμὸν ἑκατοντάδες εἰσὶ δὶς ἑπτὰ,
Καὶ τρεῖς τρὶς δεκάδες καὶ δὶς τρία. Τὶς δὲ τίς εἰμι,
Οὐκ ἀμύητος ἔσῃ τῆς παρ' ἐμοὶ σοφίης.

Thus tranſlated by Mr. Leibnitz.

Literulis noſcor, quadriſyllabus ipſe, novenis:
Syllaba habet binas, niſi quod tenet ultima ternas:
Vocales quatuor, quinis non propria vox eſt.
Bis ſeptem vicibus numerum centuria totum.
Ingreditur, decadeſque novem, tum bis tria. Si me
Noveris, hinc aditus ad ſacra noſtra patent.

Painted ænigmas are repreſentations of ſome objects, whether of nature or art, concealed under the human figure. See the next article.

F. Meneſtrier has attempted to reduce the compoſition and reſolution of Ænigma's to a kind of art, with fixed rules, and principles, which he calls the philoſophy of ænigmatic images.

ÆNIGMATICAL, denotes ſomething belonging to, or partaking of the nature of an ænigma. See the laſt article.

The antient ſages in general affected an ænigmatical way of writing, to conceal their doctrines from the populace. The Romans in Nero's time were obliged to have recourſe to the like method, though for different reaſons. The ænigmatical characters of the Egyptians were a ſpecies of hieroglyphics, conſiſting of ſuch as bore no natural reſemblance to the things they repreſented. Such was the beetle, uſed to expreſs the ſun; the ſerpent, to repreſent the ſtars.—Among the divers ſpecies of revelation, enumerated by divines, there is one called the ænigmatical. Vander Hard maintains at large, that the whole book of Jonah is ænigmatical, particularly, that by the prophet himſelf, is to be underſtood the jewiſh nation; by his being caſt into the ſea in a ſtorm, and ſwallowed by a whale, the Jews being carried into captivity; by his prayer in the fiſh's belly, the Jewiſh exiles ſupplications in their captivity; by the fiſh's vomiting him up, their return into their own country, &c.

ÆOLIC, in a general ſenſe, denotes ſomething belonging to Æolia, or Æolis.

Æolic dialect, among grammarians, one of the five dialects of the greek tongue, agreeing in moſt things with the doric dialect. See the article DORIC.

Æolic verſe, in proſody, a kind of verſe, conſiſting of an iambus, or ſpondee, then of two anapeſts, ſeparated by a long ſyllable, and laſtly, of another ſyllable. Such is,

O ſtelliferi conditor orbis,

ÆOLIPILE, *æolipila*, a hollow metalline ball, in which is inſerted a ſlender neck, or pipe; from whence, after the veſſel has been partly filled with water, and heated, iſſues a blaſt of wind with great vehemence.

Great care ſhould be taken that the aperture of the pipe be not ſtopped when the inſtrument is put on the fire, otherwiſe the æolipile will burſt with a vaſt exploſion, and may occaſion no little miſchief.

As to the phænomena of the æolipile, they may be accounted for from the rarefaction of the water. See RAREFACTION.

Dr. Plot gives an inſtance where the æolipile is actually uſed to blow the fire: the lord of the manor of Eſſington, is bound by his tenure to drive a gooſe every New-year's-day three times round the hall of the lord of Hilton, while Jack of Hilton (a brazen figure having the ſtructure of an æolipile) blows the fire. In Italy it is ſaid, that the æolipile is commonly made uſe of to cure ſmoaky chimneys: for being hung over the fire, the blaſt ariſing from it carries up the loitering ſmoak along with it.

F. Merſennus, and ſome others, have made uſe of this machine, to meaſure the gravity and degree of rarefaction of the air.

air. But this method is liable to conſiderable objections.

ÆOLIS, in antient geography, a country lying upon the weſtern coaſt of Aſia Minor.

ÆOLUS, in the heathen theology, the god of the winds, painted with ſwoln blubber cheeks, like one who with main force endeavours to blow a blaſt; alſo with two ſmall wings upon his ſhoulders, and a fiery high-colcured countenance.

ÆON, *αιων*, properly ſignifies the age or duration of any thing. See DURATION.

ÆON, among the Platoniſts, was uſed to denote any virtue, attribute, or perfection: hence they repreſented the deity as an aſſemblage of all poſſible æons, calling it pleroma, *πληρωμα*, a greek word ſignifying fulneſs.

For a farther account of æons, as received among ſome heretic chriſtians. See the article VALENTINIANS.

ÆORA, among antient phyſicians, a peculiar kind of exerciſe, which conſiſted in being carried about in a litter or other vehicle. Sometimes the patient's bed was hung by ropes, in the manner of a hammoc, and moved backwards and forwards. Travelling in a chariot, or on board a ſhip or boat, were alſo accounted ſo many kinds of æora.

ÆQUATION,	}	EQUATION.
ÆQUATOR,		EQUATOR.
ÆQUILIBRIUM,		EQUILIBRIUM.
ÆQUINOCTIAL,		EQUINOCTIAL.
ÆQUIPOLLENCE,		EQUIPOLLENCE
ÆQUIVALENT,		EQUIVALENT.
ÆQUIVOCAL,		EQUIVOCAL.
ÆQUIVOCATION	}	EQUIVOCATION

ÆRA, in chronology, a ſeries of years, commencing from a certain fixed point of time, called an epocha: thus, we ſay the chriſtian æra, that is, the number of years elapſed ſince the birth of Chriſt.

The generality of authors, however, uſe the terms æra and epocha in a ſynonymous ſenſe, or for the point of time from which the computation commences; making no other difference between them, except that the former is chiefly uſed by the vulgar, and the latter by chronologers.

Spaniſh ÆRA, a method of computing time among the antient Spaniards, commencing from the ſecond diviſion of the roman provinces between Auguſtus, Anthony, and Lepidus, in the year of Rome 714, and the 4676th year of the Julian period, and 38th before Chriſt. Hence, if to any year of the ſpaniſh æra we add 4675, the ſum will be the Julian year; or, if from the ſame year we ſubſtract 38, the remainder will be the year of the chriſtian æra.

By this æra the Spaniards computed their time for about fourteen hundred years, when it was changed for the common chriſtian æra.

Chriſtian ÆRA denotes the number of years elapſed ſince the birth of Chriſt; a method of computation firſt introduced in the ſixth century, and not received in Spain till towards the end of the fourteenth. See the article EPOCHA.

ÆRA *of Nabonaſſar*. See NABONASSAR.

ÆRA *of the Hegira*. See HEGIRA.

ÆRARIUM, in roman antiquity, the treaſury, or place where the public money was depoſited.

Ærarium and fiſcus are ſometimes uſed in a ſynonymous ſenſe, though the latter, ſtrictly ſpeaking, contained only the money belonging to the emperor.

Ærarium ſanctius was an appendage added to the former, for containing the monies ariſing from the twentieth part of all legacies, which was kept for the extreme neceſſities of the ſtate.

Ærarium privatum was the emperor's privy purſe, or place where the monies ariſing from his private patrimony were depoſited.

ÆRARIUM *Ilithiæ*, or *Junonis Lucinæ*, one where the monies were depoſited, which parents paid for the birth of each child.

There are ſeveral other treaſuries mentioned in hiſtorians, as the *ærarium juventutis, veneris*, &c.

ÆRARIUS, in a general ſenſe, denotes any perſon employed in coining, or managing the public monies. See the article ÆRARIUM.

Ærarius was more particularly uſed by the Romans for a degraded citizen, whoſe name had been ſtruck off the liſt of his century.

The *ærarii* were ſo called on account of their being liable to all the taxes and other burdens of the ſtate, without enjoying any of its privileges. Hence, *inter ærarios referri* was a great deal more ſevere puniſhment than *tribu moveri*.

AERIAL, in a general ſenſe, denotes ſomething partaking of the nature of air: thus we ſay, an aërial ſubſtance, aërial particles, &c.

Aërial is alſo uſed for any thing connected with, or belonging to air; in which ſenſe we ſay aërial inhabitants, aërial perſpective, aërial regions, &c. See the articles PERSPECTIVE and REGION.

AERIANS,

Jewiſh Æra is computed from the Creation of the world, this method is not very ancient but agreed upon about the year of their computation 4760 or 1000 of the Chriſtian æra. The Æ being formerly taken by them Rom's great went ſuch as the Æ at Egypt &c. — the Birth of Chriſt happened in the year of the world

AERIANS, *aëriani*, in church-history, a branch of arians, who to the doctrines of that sect added some peculiar dogmas of their own; as, that there is no difference between bishops and priests; a doctrine maintained by many modern divines, particularly of the presbyterian and other reformed churches. See PRESBYTERIANS.

ÆRICA, or ERICA, the name by which some call the common herring. See the article HERRING.

AEROGRAPHY signifies a description of the air, especially of its dimensions, and other most obvious properties; in which sense it differs but little from

AEROLOGY, which is a scientifical account of the nature and less obvious properties of air. See AIR and ATMOSPHERE.

AEROMANCY, *aëromantia*, a species of divination performed by means of air, winds, &c.

Aëromancy is also used for the art of foretelling the various changes of the air and weather, by means of barometers, hygrometers, &c. See BAROMETER, &c.

AËROMETRY, *aërometria*, the art of measuring the motion, gravity, elasticity, rarefaction, condensation, &c. of air; in which sense, aërometry is synonymous with pneumatics, a term in more common use. See the article PNEUMATICS.

AEROPHYLACEA, a term used by some naturalists for certain caverns or reservoirs of air, supposed to exist in the bowels of the earth, by means of which they account for the origin of springs.

AEROSTATICA, that branch of aërometry which considers the weight and ballance of the air and atmosphere.

AERSCHOT, a town of the dutch netherlands, situated in Brabant, about fifteen miles eastward of Mechlin.

ÆRUGINOUS, an epithet given to such things as resemble, or partake of the nature of the rust of copper. Thus, an æruginous colour is green, or that of verdegris.

The term æruginous is frequently applied for the green stuff cast up by vomit in bilious cases.

ÆRUGO, in natural history, properly signifies the rust of copper, otherwise called *viride æris*.

Ærugo is either natural, as that found about copper-mines; or artificial, like verdegris. See the article VERDEGRIS.

ÆRUSCATORES, in antiquity, a kind of strolling beggars, not unlike gypsies, who drew money from the credulous by fortune-telling, and playing of tricks.

The priests of Cybele were called *æruscatores magnæ matris*, on account of their begging in the streets.

Æruscatores was also a denomination given to griping exactors, or collectors of the revenue.

ÆS properly signifies copper, or money coined of that metal. See the articles COPPER and MONEY.

Authors speak of *æs rude*, *æs grave*, and *æs signatum*. Some will have the two former to denote the same thing, *viz.* money paid by weight and not by tale, as the *æs signatum*, or coined money, was. Others, again, will have the *æs grave* to have been large pieces of coined copper, containing a whole *as*, or pound weight. Kuster, on the other hand, thinks that *æs grave* was used to denote any kind of copper-money, in opposition to that made of gold or silver, which was light.

Æs *flavum*, yellow copper, among the Romans, an appellation given to the coarser kinds of brass, the finest being called *orichalcum*. See the articles BRASS and ORICHALCUM.

Flos ÆRIS, χαλκου ανθος, among antient alchemists, a kind of small scales procured from melted copper, by exposing it in a vehement heat: but among the moderns it is sometimes used for *ærugo* or verdegris.

ÆS *ustum*, among chemists, a preparation of copper, otherwise called *æs veneris*, *æs crematum*, &c.

There are several ways of making it, but the most frequent is, by exposing plates of copper in a reverberatory furnace till they will crumble into a powder, which is called *æs ustum*.

Æs ustum is extremely drying and detersive, and therefore used for eating off dead flesh, and cleansing foul ulcers; and is either sprinkled on the part in fine powder, or mixed in ointments.

Æs ustum is also used for colouring glass.

ÆSCHYNOMENE, in botany, a genus of the *diadelphia decandria* class of plants; the corolla whereof is papilionaceous; the fruit consists of a long compressoplane, articulated, unilocular pod, containing a single kidney shaped seed.

ÆSNECY, in law-books, a term used to denote the priority of age among coparceners. See the article COPARCENERS.

ÆSTIMATIO CAPITIS, a term met with in old law-books, for a fine antiently ordained to be paid for offences committed against persons of quality, according to their several degrees.

added it will give the year since the creation of the world by the Jewish æra as generally received tho' many of their doctors are of opinion that it ought to be counted higher

ÆSTIVAL, in a general ſenſe, denotes ſomething connected with, or belonging to ſummer. Hence, we ſay æſtival point, æſtival ſign, æſtival ſolſtice, *&c.* See the articles POINT, SIGN, SOLSTICE, *&c.*

ÆSTUARIA, *æſtuarium*, in geography, denotes an arm of the ſea, which runs a good way within land. Such is the Briſtol channel, and many of the friths of Scotland.

ÆSTUARIES, in the antient baths, were ſecret paſſages from the hypocauſtum, into the chambers. See the articles BATH and HYPOCAUSTUM.

ÆSTUARY, among phyſicians, denotes a vapour-bath, or any other inſtrument for conveying heat to the whole, or a particular part of the body.

ÆTATE *probanda*, in law, a writ which formerly lay to inquire whether the king's tenant was of full age; but now diſuſed, ſince the aboliſhing of wards and liveries.

ÆTH, or ATH, a ſtrong little town in the auſtrian netherlands, and province of Hainault, ſituated on the river Dender, about twenty miles S. W. of Bruſſels.

ÆTHER, Αἰθὴρ, in phyſiology, a term uſed by philoſophers for the moſt ſubtile of all fluids, which, commencing from the limits of our atmoſphere, occupies the vaſt expanſe of heaven; or, it is that inconceivable fine fluid, which fills the intermediate ſpace between one fixed ſtar and another, as well as between the planets of our ſolar ſyſtem.

Though the exiſtence of ſuch a fluid be generally allowed, yet authors differ widely with reſpect to its nature; ſome making it a finer kind of air, others a kind of fiery effluvia from the ſun and fiery ſtars; and others, a fluid *ſui generis*.

Æther is ſuppoſed by ſome philoſophers not only to fill up the intermediate ſpace between the heavenly bodies, but to permeate all bodies whatever; alſo to be the medium of light, that vaſt fluid in which the air is only a tincture; and, laſtly, that it is the cauſe of gravity in the earth and other celeſtial bodies, aſſiſted in the action of burning, and in the diſſolution of other bodies by menſtruums.

After all, there are not wanting ſome who make it a queſtion, whether there be any ſuch fluid as æther at all.

ÆTHER, in chemiſtry, a name ſometimes uſed for any extremely volatile and ſubtile ſpirit, as the *ſpiritus ætherius frobenii*. See the article SPIRIT.

Æther is more particularly uſed for an extremely penetrating ſpirit, made by diſtilling ſpirit of wine with oil of vitriol, and then precipitating the ſulphureous gas with an alcali.

ÆTHERIAL, in a general ſenſe, denotes ſomething belonging to, or partaking of, the nature of æther. See ÆTHER.

ÆTHERIAL *oil*, among chemiſts, a ſubtile eſſential oil, approaching to the nature of a ſpirit. See the article OIL.

Ætherial phoſphorus, a name given by ſome to the mercurial phoſphorus. See the article PHOSPHORUS.

ÆTHIOPS, or ÆTHIOPS MINERAL, a preparation of mercury, made by rubbing in a marble or glaſs mortar, equal quantities of quickſilver and flowers of ſulphur, till the mercury wholly diſappears, and there remains a fine deep black powder, from whence it has got the name of æthiops.

This is eſteemed one of the ſafeſt preparations of mercury, and is much uſed againſt cutaneous foulneſſes, in ſcrophulous caſes, in remains of venereal diſorders, and even in the gout and rheumatiſm. In ſcorbutic caſes, ſcarce any medicine exceeds it; and it has been long known as a remedy againſt worms. Its doſe is from a ſcruple to a dram or two.

ÆTHIOPS *albus*, a preparation of mercury, which is made by rubbing quickſilver with a double quantity of crabs eyes, or ſugar-candy, till it is extinguiſhed.

ÆTHIOPS *of Dr. Plummer*, a medicine prepared by levigating ſulphur auratum antimonii with an equal quantity of calomel: it is ſaid to be good in venereal and cutaneous diſorders.

ÆTIOLOGY, that branch of phyſic which aſſigns the cauſes of diſeaſes.

ÆTIOLOGY, in rhetoric, is deemed a figure of ſpeech, whereby, in relating an event, we, at the ſame time, unfold the cauſes of it.

ÆTITÆ, or ÆTITES, in natural hiſtory, a name given to pebbles or ſtones of any kind, which have a looſe nucleus rattling within them, and are called in engliſh, the eagle-ſtone.

So far from being a particular genus of foſſils themſelves, we find ætitæ among very different genuſes, as the geodes, heteropyræ, *&c.* but the moſt valued of all others, is that formed of the ſeveral varieties of our common pebbles. See the article GEODES, *&c.*

As to the formation of ætitæ, naturaliſts account for it from this conſideration, that as the nuclei are coarſer and more debaſed by earth than the reſt of the pebble, they

they must shrink up and contract themselves into a smaller size; by which means, it will be separated from the surrounding crust, and thereby become loose. See plate VII. fig. 3.

Many imaginary virtues have been ascribed to these stones, as, that they assist women in labour, discover thieves, &c. than which nothing can be more ridiculous.

ÆTNA, a famous burning mountain, or volcano of Sicily. It is one of the highest mountains of the whole island, and situated on the eastern coast, not far from Catania.

AFFECTIO *bovina*, a disorder incident to cattle, occasioned by a small worm, which eats its way all over the body.

AFFECTION, in a general sense, denotes an attribute inseparable from its subject, or an essential property of it. Thus, quantity, figure, weight, &c. are affections of all bodies.

AFFECTIONS *of the mind* are the same with passions or inclinations. See the article PASSION.

AFFECTION, in geometry, a term formerly used to denote the property of any curve.

AFFECTION, in medicine, a term used for any disorder with which a limb or other part of the body is afflicted. Thus, we say, the hypochondriacal, or hysterical affection, &c. See the articles HYPOCHONDRIAC PASSION, and HYSTERICS.

AFFEERERS, or AFFEERORS, in law, persons appointed in court-leets, courts-baron, &c. to settle, upon oath, the fines to be imposed upon those who have been guilty of faults arbitrarily punishable; that is, such as have no express penalty assigned by statute.

AFFETTUOSO, or *con* AFFETTO, in the italian music, intimates that the part, to which it is added, ought to be played in a tender moving way; and, consequently, rather slow than fast.

AFFIANCE, in law, denotes the mutual plighting of troth, between a man and a woman, to marry each other.

AFFIDATIO DOMINORUM, in old law-books, denotes an oath of allegiance, taken by the lords in parliament.

AFFIDATUS, or AFFIDIATUS, in old law-books, signifies a tenant by fealty; or one who put himself under the protection of his lord, vowing fealty to him.

AFFIDAVIT signifies an oath in writing, sworn before some person who is authorised to take the same.

In an affidavit, the time, place of habitation, and addition of the person who makes it, are to be inserted.

Affidavits are chiefly used to certify the serving of processes or other matters concerning the proceedings in a court; and therefore should set forth the matter of fact to be proved, without taking any notice of the merits of the cause. They are read in court upon motions, but are not admitted in evidence at trials.

By statute, the judges of the courts at Westminster may commission persons, in the several counties in England, to take affidavits relating to any thing depending in their several courts.

AFFINITY, *affinitas*, among civilians, denotes the relation of each of the parties married to the kindred of the other.

Affinity is distinguished into three kinds. 1. Direct affinity, or that subsisting between the husband, and his wife's relations by blood; or, between the wife, and her husband's relations, by blood. 2. Secondary affinity, or that which subsists between the husband, and his wife's relations by marriage. 3. Collateral affinity, or that which subsists between the husband, and the relations of his wife's relations.

The degrees of affinity are always the same with those of consanguinity. Hence, in whatever degree of consanguinity the kindred of one of the parties married are, they are in the same degree of affinity to the other.

By the canon law, direct affinity renders marriage unlawful to the fourth generation, inclusive; but the case is otherwise with respect to the secondary and collateral kinds. It is likewise to be observed, that the affinity contracted by a criminal commerce, is an impediment to marriage so far as the second generation: thus, a man is not allowed to marry the sister of a woman he has lain with. Nay, with regard to contracting marriage, affinity is not dissolved by death: for, though a woman may be admitted a witness for the brother of her deceased husband, she is not allowed to marry him.

In the romish church, a kind of spiritual affinity is supposed to be contracted by baptism; so that it is not deemed lawful for a god-father to marry his god-daughter, without a dispensation.

AFFINITY is also used to denote a conformity,

nity, or agreement, between two or more things: thus, we ſay, the affinity of languages, the affinity of words, the affinity of ſounds, &c.

AFFIRMATION, among logicians, is the act of the mind aſſerting the truth or reality of ſomething; or it is a poſitive propoſition, declaring certain properties or qualities to belong to the thing in queſtion: thus, when I ſay, *every circle is a perfectly round figure*, I affirm perfect roundneſs to be an inſeparable property of a circle.

AFFIRMATION is alſo uſed for the ratifying or confirming the ſentence, or decree, of ſome inferior court: thus, we ſay, the houſe of lords on an appeal affirmed the decree of the lord chancellor, or the decree of the lords of ſeſſion.

AFFIRMATION alſo denotes a ſolemn atteſtation of the truth of ſome fact, which the quakers are allowed to make inſtead of an oath.

This ſect think all kinds of ſwearing unlawful; and therefore the legiſlature has appointed the following affirmation to be taken inſtead thereof, *viz. I A. B. do ſincerely, ſolemnly, and truly declare and affirm, &c.* This affirmation is, by ſtatute, put upon the ſame footing with an oath; every perſon convicted of affirming a falſhood, being liable to the penalties provided againſt wilful and corrupt perjury. It is alſo deemed equivalent to an oath, except in criminal caſes, upon juries, and in places of profit and truſt under the government.

AFFIRMATION, among ſome grammarians, denotes a part of ſpeech generally called a verb. See the article VERB.

AFFIRMATIVE, in a general ſenſe, denotes any thing which implies an affirmation. See the article AFFIRMATION.

AFFIRMATIVE, in the roman inquiſition, a deſignation given to ſuch heretics as openly avow the opinions they are charged withal.

AFFIRMATIVE *character*. See the article CHARACTER.

AFFIRMATIVE *propoſition*. See the article PROPOSITION.

AFFIRMATIVE *quantity*. See QUANTITY.

AFFIRMATIVE *ſign*. See SIGN.

AFFIX, among grammarians, a particle added at the beginning of a word, either to diverſify its form, or alter its ſignification.

In the hebrew language, there are a multitude of affixes, i. e. ſingle letters or ſyllables, which, being prefixed to nouns and verbs, ſerve inſtead of pronouns, and contribute greatly to the brevity of that language.

AFFLATUS, among heathen mythologiſts and poets, denotes the actual inſpiration of ſome divinity: thus, Virgil,

afflata eſt numine quando
Jam propriore Dei.

Tully, however, muſt be underſtood to extend the meaning of the word farther, when he attributes all great actions to a divine *afflatus*. See INSPIRATION.

AFFORAGE, in the french cuſtoms, a duty paid to the lord of a diſtrict, for permiſſion to ſell wine, or other liquors, within his ſeigniory.

Afforage is alſo uſed for the rate or price of proviſions, laid and fixed by the provoſt of Paris, or by the ſheriffs.

AFFORESTING, *afforeſtatio*, in our old law-books, is the turning lands into a foreſt, as the converting a foreſt to other uſes, is called *diſafforeſting*, or *deafforeſting*.

AFFRAY, or AFFRAYMENT, in law, formerly ſignified the crime of affrighting other perſons, by appearing in unuſual armour, brandiſhing a weapon, &c. But at preſent, affray denotes a ſkirmiſh or fighting between two or more: and there muſt be a ſtroke given, otherwiſe it is no affray.

An affray is a common injury, puniſhable by the juſtices of the peace in their ſeſſions, by fine and impriſonment, and accordingly, differs from aſſault, which is a private offence.

A conſtable may ſeize, and carry affrayers before a juſtice; as may likewiſe any private perſon.

AFFRONTE'E, in heraldry, an appellation given to animals facing one another on an eſcutcheon, a kind of bearing which is otherwiſe called *confrontée*, and ſtands oppoſed to *adoſſée*.

AFRICA, in geography, a vaſt peninſula, which makes one of the four grand diviſions, or quarters of the world, as they are commonly, though falſely called.

It is joined to Aſia by the iſthmus of Suez, reaches about four thouſand two hundred miles in breadth from eaſt to weſt, and is ſituated between 37° north latitude, and 35° ſouth latitude. The Mediterranean ſea bounds it on the north, the iſthmus of Suez, the red-ſea, and the eaſtern ocean, on the eaſt; the ſouthern ocean on the ſouth; and the atlantic, or weſtern ocean on the weſt.

Geographers

Geographers divide Africa into ten grand divisions: 1. Egypt. 2. Abyſſinia, or the upper Ethiopia. 3. The coaſt of Anian and Zanguebar. 4. Monoemugi, Monomotapa, and Caffraria, ſometimes called the lower Ethiopia. 5. Congo, Angola, and Guinea. 6. Nigritia, or Negroland. 7. Zaara, or the deſert. 8. Biledulgerid, the antient Numidia. 9. The empire of Morocco. 10. The coaſt of Barbary, on the Mediterranean, comprehending the countries of Algiers, Tunis, Tripoly, and Barca. See the article EGYPT, *&c.*

The principal commodities are gold, ambergreaſe, elephants teeth, guinea-pepper, red-wood, hides, wax, ſaunders, ſugar, civet, oil, cardamums, hemp, flax, dates, almonds, indigo, gum, oſtrich-feathers, amber, ebony, canes, citrons, lemons, copper, cocoa-nuts, cloves, ſaffron, cryſtal, and a multitude of negroes, that ſupply our american plantations with ſlaves.

Africa is repreſented in painting, by a black woman almoſt naked, with friz-zled hair, an elephant's trunk for a creſt, a fierce lion on one ſide, and a viper and ſerpent on the other; with other emblems of the produce of the country.

AFRICA is alſo a conſiderable ſea-port town of Barbary, about ſeventy miles ſouth of Tunis.

AFRICAN *company*, a ſociety of merchants eſtabliſhed by king Charles II. for trading to Africa; which trade is now laid open to all his majeſty's ſubjects, paying ten per cent. for maintaining the forts.

AFSAGERS, perſons appointed by the burgo-maſters of Amſterdam, to preſide over the public ſales made in that city. They muſt always have a clerk of the ſecretaries office, with them, to take an account of the ſale.

AFT, in the ſea language, the ſame with abaft. See the article ABAFT.

AFTER-*birth*, in midwifery, the membranes which ſurrounded the infant in the womb, more uſually called the ſecundines. See the articles DELIVERY and SECUNDINES.

In brutes this is called the heam, or cleaning.

AFTER-*math*, in huſbandry, ſignifies the graſs which ſprings or grows up after mowing; or the graſs, or ſtubble, cut after corn.

AFTER-*noon*, denotes one half of the natural day, or the ſpace of time between noon and night.

The antient Romans dedicated their afternoons to diverſion, as their forenoons to buſineſs. The former were reſerved for pleaſure, and the enjoyment of life. But though it was the rule not to take any part of the afternoon for buſineſs, nor any of the forenoon for pleaſure, yet ſome few of the more laborious magiſtrates made it a cuſtom to continue their occupation to the tenth hour, anſwering to our four o'clock, as is related of Aſinius Pollio; but after that time, he would not ſo much as open a letter, from whatever quarter it came.

AFTER-*pains*, in midwifery, exceſſive pains felt in the groin, loins, *&c.* after the woman is delivered. See DELIVERY.

In order to guard againſt them, phyſicians recommend oil of ſweet almonds, ſperma ceti, troches of myrrh and ſyrup of maiden-hair; and, generally, with ſucceſs.

AFTER-*ſwarms*, in the management of bees, are thoſe which leave the hive ſome time after the firſt has ſwarmed.

Butler tells us, that the after-ſwarms differ from the prime, in that the latter are directed by the vulgar, or crowd of bees, whoſe only rule is the fulneſs of the hive; whereas the former are appointed by the ruling bees, and indicated by a noiſe, or call, which theſe make for the ſpace of two or three days, as it were to give warning to the common herd to prepare for a march. Within eight or ten days after the prime-ſwarm is gone, if the princeſs next in order find a competent number fledged and ready, ſhe begins to tune her treble voice, in a mournful and begging note, as if ſhe prayed the queen-mother to let them go; to which voice, if ſhe vouchſafe a reply, by tuning her baſs to the other's treble, it marks her conſent: in conſequence of which, within a day or two after, if the weather allow, the new ſwarm appears. If the prime ſwarm be broken, the after will both call and ſwarm the ſooner, perhaps the next day; in which a third, ſometimes a fourth, ſucceeds in the ſame ſeaſon; but all uſually within a fortnight after the prime-ſwarm. See BEE.

AGA, in the turkiſh language, ſignifies a great lord, or commander. Hence, the aga of the janizaries is the commander in chief of that corps; as the general of the horſe is denominated ſpahiclar aga. See JANIZARIES and SPAHI's.

Inſtead of aga, the term agaſſi, or agaſi, is not unfrequently met with; as the capi-agaſſi, *i. e.* the chief of the pages, *&c.*

AGANIPPIDES, in antient poetry, a deſignation

ſignation given to the muſes, from a fountain of mount Helicon, called Aganippe.

AGAPÆ, or AGAPES, in church-hiſtory, certain love-feaſts kept by the antient chriſtians, as a token of brotherly charity and mutual benevolence.

However innocent the original intention of theſe feſtivals might have been, abuſes in time got footing in them, and gave great occaſion for ſcandal; ſo that it became neceſſary to forbid the kiſs of charity between perſons of different ſexes, as well as to have any beds or couches in the place where they aſſembled.

AGAPETÆ, in church-hiſtory, a kind of nuns among the primitive chriſtians, who attended on, and ſerved the clergy.

At firſt there was nothing ſcandalous in theſe ſocieties, though they gave great offence afterwards, and were wholly aboliſhed by the council of Lateran, in 1139.

AGARIC, *agaricus*, in botany, a genus of the cryptogamia algæ claſs of plants, growing on the trunks of trees, eſpecially the larch-tree, and reſembling the common muſhroom, both in ſubſtance and ſtructure. See plate VII. fig. 4.

Agaric is a fungus, of an irregular figure, three or four inches in length, and as many in breadth and thickneſs. It is extremely ſoft and elaſtic, taking an impreſſion from the leaſt touch, and reſuming its former figure again: its colour, on the out-ſide, is a pale yellowiſh white, but a pure white within.

It was much uſed by the antients, as a purge; but the preſent practice condemns it, as being not only diſagreeable, but unſafe and pernicious.

Female AGARIC, the agaricus pedis equini facie of Tournefort, called from its being very eaſily inflammable, touchwood or ſpunk, is a fungus frequently met with on different kinds of trees in England, and has been ſometimes brought into the ſhops mixed with the true agaric of the larch. From this it is eaſily diſtinguiſhable, by its greater weight, duſky colour, and mucilaginous taſte, void of bitterneſs. The medullary part of this fungus, beat ſoft, and applied externally, has been of late greatly celebrated as a ſtyptic, and ſaid to reſtrain not only venal, but arterial hæmorrhages, without the uſe of ligatures. See the articles STYPTIC and HÆMORRHAGE.

Mineral AGARIC, in natural hiſtory, a light marley earth, ſo called on account of its reſemblance to the vegetable agaric, in its colour and ſpongy texture.

It never conſtitutes a ſtratum of itſelf, but is found in cracks and fiſſures of rocks, roofs of caverns, and ſometimes in the horizontal vacuities of theſe ſtrata, in form of a white porous powder.

Mineral agaric is a good aſtringent, and therefore preſcribed in fluxes, hæmorrhages, to dry old ulcers, ſtop defluxions of the eyes, &c.

AGAT, *achates*, in natural hiſtory, a genus of ſemipellucid gems, variegated with veins and clouds, but without zones like the onyx.

Agats are formed of a cryſtalline ſubſtance, variouſly debaſed with earths of different colours, to which is to be attributed the variety of their appearance. Thus, ſome have a white ground, as the *dendrachates* or mocoa-ſtone, the *phaſachates*, and another ſpecies. Others have a reddiſh ground, as the *hæmachates*, *ſardachates*, *corallo-achates*, &c. Others, again, a yellowiſh ground, as the *cerachates* and *leonteſeres*. And, laſtly, ſome have a greeniſh ground, as the *jaſpachates*. A more particular account of all which may be ſeen under their ſeveral articles DENDRACHATES, PHASACHATES, HÆMACHATES, &c.

Agats have got peculiar denominations according to the different figures repreſented on them, their affinity to other gems, and the ſubſtance they moſt reſemble in colour. Hence, the *dendrachates*, *ſardachates*, *hæmachates*, &c.

AGAT is alſo the name of an inſtrument uſed by the gold wire-drawers; ſo called from the agat in the middle of it, which forms its principal part.

AGATTON, a town of Africa, on the coaſt of Guinea, ſituated near the mouth of the river Formoſa, about eighty miles ſouth of Benin.

AGAVE, the *aloe*, in botany. See ALOE.

AGDE, a ſmall, but well inhabited city of France, in the province of Languedoc, near the mouth of the river Erau, about thirty miles ſouth-weſt of Montpelier. It is the ſee of a biſhop.

AGE, in a general ſenſe, denotes a certain portion, or part of duration, applied to the exiſtence of particular objects: thus we ſay, the age of the world, the age of Rome, &c. that is, the time, or number of years, elapſed ſince the creation of the world, or the building of Rome. The age alſo a man's age is the time he has lived, or the number of years elapſed ſince his birth; and ſo in other inſtances, as the age of a houſe, the age of a tree, &c.

AGE, in horſemanſhip, makes a conſi-

ra

Fig. 1. ADIANTUM, or *MAIDEN-HAIR*.



Fig. 2. ADMIRAL-*SHELLS*.

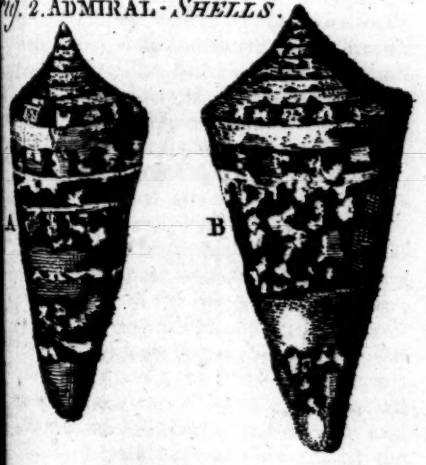


Fig. 3. ÆTITES.

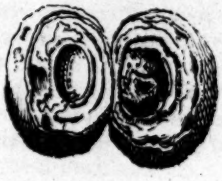


Fig. 4. AGARIC.



Fig. 5. AGERATUM.



T. Jefferys sculp.

BRITISH MUSEUM

rable point of knowledge; the horſe being an animal that remarkably ſhews the progreſs of his years, by correſpondent alterations in his body.

We have characteriſtics from his teeth, hoofs, coat, tail, and eyes.

1. The firſt year he has only ſmall grinders and gatherers, of a brightiſh colour, which are called foal's teeth. The ſecond year he changes his four foremoſt teeth, *viz.* two above, and two below, and they appear browner and bigger than the reſt. The third year he changes the teeth next theſe, leaving no apparent foal's teeth before, but two above, and two below, on each ſide, which are all bright and ſmall. The fourth year, he changes the teeth next theſe, and leaves no more foal's teeth before, but one above and below on each ſide. The fifth year his foremoſt teeth are all changed, and the tuſhes on each ſide are complete; and thoſe which ſucceed the laſt foal's teeth are hollow, with a ſmall black ſpeck in the middle, which is called the mark in a horſe's mouth, and continues till he is eight years old. The ſixth year there appear new tuſhes, near which is viſible ſome young fleſh, at the bottom of the tuſh; the tuſhes being white, ſmall, ſhort, and ſharp. The ſeventh year his teeth are at their full growth, and the mark in his mouth appears very plain. At eight all his teeth are full, plain, and ſmooth, and the black mark but juſt diſcernable; the tuſhes looking more yellow than ordinary. The ninth his foremoſt teeth ſhew longer, broader, yellower, and fouler than before, the mark quite diſappearing, and the tuſhes bluntiſh. At ten no holes are felt on the inſide of the upper tuſhes, which, till then, are eaſily felt. At eleven his teeth are very long, yellow, black, and foul, and ſtand directly oppoſite each other. At twelve the teeth of his upper jaw hang over thoſe of his under. At thirteen his tuſhes are worn almoſt cloſe to his chaps, if he has been much ridden; otherwiſe they will be long, black, and foul.

2. With regard to the hoof; If it be ſmooth, moiſt, hollow, and well ſounding, it is a ſign of youth; but if, on the contrary, it be rugged, and as it were, covered with ſeams one above another, and withal dry, foul, and cruſty, it is a ſign of old age.

3. If a joint about the ſtern of the tail, near the buttock, be felt to ſtick out more than the reſt by the bigneſs of a nut, you may conclude him under ten, but if the joints are all ſmooth he may be fifteen.

4. If the eyes are round, full, and, as it were, ſtarting from his head, having no pits over them, but ſmooth and even with his temples, and free from wrinkles, both under and above, it is a certain mark of youth.

5. If the ſkin be taken up in any part between the finger and thumb, and, being let go, returns ſuddenly to its place, and remains without wrinkles, he may be judged to be young.

We may alſo judge of a horſe's age, by looking on his palate; for if he is old, the roof of his mouth is lean and dry towards the middle, and thoſe ridges, which, in young horſes, are pretty high and plump, diminiſh as they increaſe in age; ſo that in very old horſes, the roof of the mouth is nothing but ſkin and bone. — This laſt is a very neceſſary remark, eſpecially in mares, which ſeldom have any tuſhes to diſcover their age by.

AGE *of a hart*, in hunting, is judged by the furniture of his head. — At a year old, there is nothing to be ſeen but bunches. At two, the horns appear more perfectly, but ſtraiter and ſmaller. At three they grow into two ſpars; at four into three, and ſo increaſe yearly in branches, till they are ſix years old; after which their age is not certainly to be known by their head.

AGE is alſo uſed in a ſynonymous ſenſe with century. See CENTURY.

AGE likewiſe denotes certain periods of the duration of the world.

Thus, among chriſtian chronologers, we meet with the age of the law of nature, which comprehends the whole time between Adam and Moſes; the age of the jewiſh law, which takes in all the time from Moſes to Chriſt; and laſtly, the age of grace, or the number of years elapſed ſince the birth of Chriſt.

Among antient hiſtorians, the duration of the world is alſo ſubdivided into certain periods, called ages; of which they reckon three: the firſt, reaching from the creation to the deluge which happened in Greece, during the reign of Ogyges, is called the obſcure or uncertain age; the hiſtory of mankind, during that period, being altogether uncertain. The ſecond, called the fabulous or heroic, terminates at the firſt olympiad; where the third, or hiſtorical age, commences.

The antient poets also divided the duration of the world into four ages, or periods; the first of which they called the golden age, the second the silver age, the third the brazen age, the fourth the iron age. Not unlike these are the four ages of the world, as computed by the East-Indians, who extend them to a monstrous length.

AGE also denotes certain degrees or periods of human life, commonly reckoned four, *viz.* infancy, youth, manhood, and old age. The first of which extends to the fourteenth year; the second, to the twenty-fifth year; the third, to the fiftieth year: and the fourth, to the seventy-fifth year, or rather, as long as a man lives. See the article LONGEVITY.

AGE, in law, signifies certain periods of life, when persons of both sexes are enabled to do certain acts, which for want of years and discretion they were incapable of before: thus, a man at twelve years of age, ought to take the oath of allegiance to the king, in a leet: at fourteen, which is his age of discretion, he may marry, choose his guardian, and claim his lands held in socage.

Twenty-one is called full age, a man or woman being then capable of acting for themselves, of managing their affairs, making contracts, disposing of their estates, and the like; which before that age they could not do.

A woman is dowable at nine years of age, may marry at twelve, and at fourteen choose her guardian.

If a man or woman acts in any of the above-mentioned capacities, before the time prescribed by law, he or she may retract at that time, otherwise they are supposed to agree to it anew, and it shall be deemed valid. Thus, if a man marries before fourteen, or a woman before twelve, they may either agree to the marriage, or not, at these several ages; and so in other cases.

At fourteen, a man may dispose of his personal estate by will, but not of lands. At this age too a man or woman is first capable of being a witness, and under it persons are not generally punishable for crimes, though they must satisfy the damage sustained by trespass committed by them.

AGE-*prier*, *ætatem precari*, is when an action being brought against a person under age, for lands descended to him, he, by motion or petition, shews the matter to the court, praying the action may be staid till his full age; which the court generally agrees to. However, as a purchaser, a minor shall not have his age-prier; nor in any writ of assize, of dower, or petition; but he may in any action of debt.

By the civil law the case is otherwise, an infant or minor being obliged to answer by his tutor or curator.

Among the Romans it was unlawful to put up for any public office, or magistracy, unless the candidate had attained to a certain age; which differed according to the offices sued for. Hence the phrases consular age, prætorian age, &c. See the articles CONSUL, PRÆTOR, &c.

AGE *of the moon*, in astronomy, the time elapsed since her last conjunction with the sun. See the article MOON.

AGEMOGLANS, AGIAMOGLANS, or AZAMOGLANS, in the turkish customs, christian children raised every third year, by way of tribute, from the christians tolerated in the turkish empire.

The collectors of this odious tax used to take one child out of three, pitching always upon the most handsome.

The word agemoglans properly signifies a barbarian's child; and out of their number, after being circumcised, and instructed in the religion and language of their tyrannical masters, are the janizaries recruited. As to those who are thought unfit for the army, they are employed in the lowest offices of the seraglio.

AGEN, an antient city of France, in the province of Guienne, situated on the river Garronne, about sixty miles south-east of Bourdeaux. It is a bishop's see, and the capital of the Agenois.

AGENDA, among philosophers and divines, signifies the duties which a man lies under an obligation to perform: thus we meet with the agenda of a christian, or the duties he ought to perform, in opposition to the credenda, or things he is to believe.

Agenda is more particularly used for divine service; in which sense, we meet with *agenda matutina & vespertina*; that is, morning and evening prayers.

AGENDA, among merchants, a term sometimes used for a memorandum book, in which is set down all the business to be transacted during the day, either at home or abroad.

AGENT, in a general sense, denotes any thing which acts or produces an effect. See the articles ACT and ACTION.

Agents are either natural or moral.

Natural agents are all such inanimate bodies, as have a power to act upon other bodies, in a certain and determinate manner: such is fire, which has the invariable property or power to warm or heat. Moral agents, on the contrary, are rational creatures, capable of regulating their actions by a certain rule.

It is a celebrated question among philosophers, and divines, whether man be a free, or a necessary agent? It may be thus stated: man is a necessary agent if all his actions are so determined by the cause preceding each action, that not one past action could possibly not have come to pass, or have been otherwise than it was; nor one future action can possibly not come to pass, or be otherwise than it shall be. On the contrary, man is a free agent, if he be able at any time, under the circumstances and causes he then is, to do different things; or in other words, if he is not ever unavoidably determined in every point of time, by the circumstances he is in, to do that one thing he does, and not possibly to do any other. See the article FREE.

Which of these two definitions agrees to man, is a question of fact to be determined by what we experience in ourselves, with regard to the operations of our own minds. A late author pretends to reduce the latter definition to an absurdity.

AGENTS, among physicians and chemists, an appellation given to all kinds of menstruums.

AGENT is also used to denote a person entrusted with the management of an affair, whether belonging to a society, company, or private person; thus we say, agents of the exchequer, of the victualling office, *&c.*

AGENTS *of bank and exchange*, in the commercial polity of France, are much the same with our exchange-brokers.

AGENT *and patient*, in law, is said of a person who is the doer of a thing, and also the party to whom it is done. Thus, if a man who is indebted to another, makes his creditor his executor, and dies, the executor may retain so much of the goods of the deceased, as will satisfy his debt; by which means he becomes agent and patient; that is, the person to whom the debt is due, and the person who pays it.

AGERATUM, *maudlin*, in botany, a genus of the syngenesia polygamia æqualis class of plants, with a monopetalous personated flower; and an oblong membranaceous fruit, divided into two cells, which contain a number of minute seeds, affixed to a placenta. See plate VII. fig. 5.

This plant is said to be good for incontinence of urine, on account of its astringent virtue; but is rarely prescribed in the present practice.

AGGA, or AGONNA, a british settlement on the gold coast of Guinea. It is situated under the meridian of London, in 6 degrees of north lat.

AGGER, in the antient military art, a bank or rampart, composed of various materials, as earth, boughs of trees, *&c.* The agger of the antients was of the same nature with what the moderns call lines.

AGGER was also used in several other senses, as for a wall or bulwark, to keep off the sea; for the middle part of a military road, usually raised into a ridge; and sometimes for the heaps of earth raised over graves, more commonly called *tumuli*.

AGGERHUYS, a city of Norway, capital of the province of the same name. It is subject to Denmark, and situated in 11° east longit. and 59° 30′ north lat.

AGGLUTINANTS, *agglutinantia*, in pharmacy, *&c.* make a class of strengthening medicines, of a glutinous or viscous nature; which, by readily adhering to the solids, contribute greatly to repair their loss.

Agglutinants may be divided into two kinds: 1. Good nourishing foods, especially jellies, whether of hartshorn, veal, mutton, *&c.* 2. Medicines, properly so called, as olibanum, dragon's blood, gum tragacanth, cassia, comfrey, plantain, and others of the same intention.

AGGLUTINANTS, among surgeons, denote much the same with vulneraries. See the article VULNERARY.

AGGLUTINATION, in a general sense, denotes the joining two or more things together, by means of a proper glue or cement.

AGGLUTINATION, among physicians, signifies either the adherence of new substance, or the giving a glutinous consistence to the animal fluids, whereby they become more fit for nourishing the body. See the article AGGLUTINANTS.

Agglutination, according to some, is effected by a fermentation; whilst others

attribute ſuch a glutinous nature to the chyle, that a bare contact ſuffices to make it adhere.

AGGLUTINATION is alſo a term uſed by aſtronomers, to denote the meeting of two or more ſtars in the ſame part of the zodiac, or the ſame coalition of ſeveral ſtars.

AGGRAVATION, a term uſed to denote whatever heightens a crime, or renders it more black.

AGGREGATE, in a general ſenſe, denotes the ſum of ſeveral things added together, or the collection of them into one whole. Thus, a houſe is an aggregate of ſtones, wood, mortar, *&c.* See the article AGGREGATION.

An aggregate differs from text, mixt, or compound; in as much as the union in theſe laſt is more intimate, than between the parts of an aggregate. See the article TEXT, *&c.*

AGGREGATION, in natural philoſophy, a ſpecies of union, whereby ſeveral things, nowiſe connected by nature, are collected together ſo as to form one whole.

AGGREGATION is alſo uſed in a figurative ſenſe, for an aſſociation, or the adding new members to a ſociety already eſtabliſhed.

AGGRESSOR, among lawyers, denotes the perſon who began a quarrel, or made the firſt aſſault.

It is a very material point to know who was the firſt aggreſſor, and accordingly never fails to be ſtrictly enquired into.

AGHRIM, a town of Ireland in the county of Wicklow, and province of Leinſter, ſituated about thirteen miles ſouth-weſt of Wicklow.

AGIADES, in the turkiſh armies, denote a kind of pioneers, employed in fortifying camps, and the like offices.

AGILD, or AGILDE, in old law-books, denotes a perſon of ſo little account, that whoever killed him was liable to no fine for ſo doing.

AGILITY, *agilitas*, ſignifies an aptitude of the ſeveral parts of the body to motion; or it may be defined, the art or talent of making the beſt uſe of our ſtrength.

AGINCOURT, a village of the french Netherlands; famous on account of the victory obtained by Henry V. of England, over the French, in 1415.

AGIO, in commerce, a term chiefly uſed in Holland and at Venice, where it denotes the difference between the value of bank ſtock, and the current coin.

Money in bank is commonly worth more than ſpecie: thus, at Amſterdam, they give 103 or 104 florins for every 100 florins in bank. At Venice, the agio is fixed at 20 *per cent.*

Agio is alſo uſed for the profit ariſing from the diſcounting a note, bill, *&c.* See the articles BILL and DISCOUNT.

Agio of aſſurance, is the ſame with what we call policy of aſſurance. See the article POLICY.

AGIOSYMANDRUM, in the greek church, ſubject to the Turks, a wooden machine, uſed inſtead of bells, the uſe of theſe being prohibited.

AGIST, AGISTMENT, AGISTAGE, or AGISTATION, in law, the taking in other people's cattle to graze, at ſo much *per* week.

The term is peculiarly uſed for the taking in cattle to be fed in the king's foreſts, as well as for the profits thence ariſing.

AGISTMENT is alſo uſed in a metaphorical ſenſe, for any tax, burden, or charge: thus, the tax levied for repairing the banks of Romney marſh was called *agiſtamentum.*

AGISTOR, or AGISTATOR, an officer belonging to foreſts, who has the care of the cattle taken in to be grazed, and levies the monies due on that account.

There are four ſuch agiſtors in each foreſt all created by letters patent, and commonly called gueſt-takers, or gift-takers.

AGITATION, *agitatio*, the act of ſhaking a body, or toſſing it backwards and forwards.

Agitation greatly aſſiſts ſeveral operations of nature. By it butter is made out of milk. Digeſtion too is reckoned an inſenſible kind of agitation.

The agitation of the body is deemed one mark of inſpiration. See INSPIRATION.

AGITATION, among antient phyſicians, denotes a kind of exerciſe, generally called ſwinging, which they put in practice when the patient could uſe no other exerciſe.

AGITATOR, in antiquity, a term ſometimes uſed for a charioteer, eſpecially thoſe who drove in the circus at the curule games.

AGITATORS, in the engliſh hiſtory, certain officers ſet up by the army in 1647, to take care of its intereſts.

Cromwell

Cromwell joined the agitators, only with a view to ſerve his own ends; which being once accompliſhed, he found means to get them aboliſhed.

AGLECTS, AGLETS, or AGLEEDS, among botaniſts, the ſame with what is more uſually called apices. See APICES.

AGMEN, in the roman art of war, denoted an army, or rather a part of it, in march: thus we read of the *primum agmen*, or van-guard; *medium agmen*, or main body; and the *poſtremum agmen*, or rear-guard. We alſo meet with the *agmen pilatum*, which was a part of the army, drawn up in form of an oblong parallelogram, and anſwered to what the moderns call column. However, the *agmen quadratum*, or ſquare form, was that moſtly practiſed in the roman armies.

AGMONDESHAM, in geography. See the article AMERSHAM.

AGNABAT, a town of Tranſylvania, ſubject to the houſe of Auſtria, ſituated about ten miles north-eaſt of Hermanſtadt.

AGNATION, *agnatio*, among civilians, denotes the relation of kinſhip ſubſiſting between the deſcendants of the ſame man, in the male line.

AGNOETÆ, in church-hiſtory, a ſect of heretics, ſo called on account of their maintaining, that Chriſt, with reſpect to his human nature, was ignorant of many things, and particularly of the day of judgment, an opinion which they built upon the text, Mark xiii. 32. whereof the moſt natural meaning is, that the knowledge of the day of judgment does not concern our Saviour, conſidered in the character of Meſſiah.

AGNOMEN, in roman antiquity, a kind of fourth or honorary name, given to a perſon on account of ſome extraordinary action, virtue, or other accompliſhment. Thus the agnomen Africanus was beſtowed upon Publius Cornelius Scipio, on account of his great atchievements in Africa. In caſes of adoption, it was uſual to retain their former cognomen, or family name, by way of agnomen: thus Marcus Junius Brutus, being adopted by Quintus Servilius Cæpio, called himſelf Quintus Servilius Cæpio Brutus.

Some contend, that the agnomen was the third in order of three roman names: thus, in Marcus Tullius Cicero, that Marcus is the prænomen, Tullius the nomen, and Cicero the agnomen; and others are of opinion, that the agnomen is the ſame with the cognomen.

AGNUS, the lamb, in zoology, the young of the ſheep-kind; for the proper treatment of which, ſee the article LAMB.

AGNUS *caſtus*, in botany, &c. a name given to the vitex, on account of its efficacy in preventing looſe venereal deſires, pollutions, &c. See the article VITEX.

During the feaſt of Ceres, the athenian ladies, who made profeſſions of chaſtity, lay upon the leaves of *agnus caſtus*; and to this day the monks and nuns are ſaid to uſe them for the ſame purpoſe.

AGNUS *dei*, in the church of Rome, a cake of wax, ſtamped with the figure of a lamb ſupporting a croſs.

Theſe being conſecrated by the pope with great ſolemnity, and diſtributed among the people, are ſuppoſed to have great virtues; as to preſerve thoſe who carry them worthily, and with faith, from all manner of accidents; to expel evil ſpirits, &c.

What an admirable expedient to drain the purſes of the credulous laity, and fill thoſe of the clergy!

Agnus dei is alſo a popular name for that part of the maſs, where the prieſt ſtrikes his breaſt thrice, and ſays the prayer beginning with the words *agnus dei*.

AGNUS *ſcythicus*, in natural hiſtory, the name of a fictitious plant, ſaid to reſemble a lamb, and to grow in Tartary.

The uſual account given of this extraordinary production is, that the Tartars ſow in their ground a ſeed reſembling that of melon, but leſs oblong; from whence ariſes a plant called by them Borometz; *i. e.* lamb, growing almoſt to the height of three feet, and having feet, hoofs, ears, and the whole head, excepting horns, reſembling that animal. In lieu of horns it has a peculiar ſort of hair, not unlike horns; it is covered with a fine thin ſkin, which being pulled off, is worn by the natives as a cover for the head. The pulp within reſembles that of the Gammarus; and when wounded, a liquor ouzes out like blood. It lives as long as there is graſs and herbage around it; but when theſe are conſumed, it waſtes and dies. Add, that wolves are fond of it, while no other beaſts will feed on it.

Kæmpfer, who was in the country, could not, by the moſt diligent enquiry, find any account of it: and therefore concludes the whole to be a fiction.

As to the curioſities ſhewn under this name, they can be nothing elſe but the capillary roots of certain plants helped out by art.

AGOGE, among antient muſicians, a ſpecies of modulation, wherein the notes proceeded by contiguous degrees.

There are three kinds of agoge: 1. When the notes riſe from grave to acute, as, B C D E, called by the antients *ductus rectus*, and by the modern Italians *conducimento retto*. 2. When they fall from acute to grave; as E D C B, called by the antients *ductus revertens*, and by the modern Italians *conducimento ritornante*. 3. When they riſe by flats and fall by ſharps, called by the antients *ductus circumcurrens*, and by the modern Italians *conducimento circoncorrente*.

AGON, in the public games of the antients, a term uſed indifferently for any conteſt or diſpute, whether reſpecting bodily exerciſes, or accompliſhments of the mind. Thus poets, muſicians, *&c.* had their agones, as well as the athletæ.

Games of this kind were celebrated at moſt of the heathen feſtivals, and not unfrequently by themſelves, either annually, or at certain periods of years: of this laſt kind were the *agon gymnicus* at Athens, the *agon nemeus*, *agon neronianus*, *agon ſolis*, *&c.*

AGON was alſo uſed for one of the miniſters employed in the heathen ſacrifices, whoſe buſineſs it was to ſtrike the victim.

AGONALES, or AGONENSES, in roman antiquity, the ſame with the ſalii. See the article SALII.

AGONALIA, in roman antiquity, feſtivals celebrated in honour of Janus, or of the god Agonius, whom the Romans invoked before undertaking any affair of importance.

They ſeem to have been kept three times in the year, *viz.* on the 5th of the ides of January, on the 12th of the calends of June, and on the third of the ides of December.

AGONISTARCHA, in antiquity, the officer who directed the preparatory exerciſes of the athletæ; though ſome make him the ſame with the agonotheta. See AGONOTHETA.

AGONOTHETA, AGONODICA, or AGONOTHETES, in grecian antiquity, was the preſident or ſuperintendant of the ſacred games; who not only defrayed the expences attending them, but inſpected the manners and diſcipline of the athletæ, and adjudged the prizes to the victors.

At firſt there was only one agonotheta, in the olympic games; but ſeveral colleagues were afterwards joined with him, three of whom had the direction of the horſe races, three others of the pentathlon, and the reſt of the other exerciſes.

AGONUS, in ichthyology, the name of a fiſh of the herring-kind; being a ſpecies of clupea, with black ſpots on both ſides. See plate VIII. fig. 1. and the article CLUPEA.

AGONY, among phyſicians, denotes extreme pain, or the utmoſt efforts of nature, ſtruggling with a diſeaſe.

Agony, in a more limited ſenſe, is uſed for the pangs of death; which are leſs painful than uſually imagined, the body being then incapable of quick ſenſations. However, various means have been thought of for mitigating the agony of death. Lord Bacon conſiders this as part of the province of a phyſician; and that not only, when ſuch a mitigation may tend to a recovery, but alſo when, there being no further hopes of a recovery, it can only tend to make the paſſage out of life more calm and eaſy.

Opium has been applied for this purpoſe, with the applauſe of ſome, but the condemnation of more. Baglivi promiſed a treatiſe expreſs, *de medicina Agonizantium*, or the method of treating thoſe in the agonies of death. Some think a medicine might be found out, which would alleviate the pains of death, without accelerating it, or which might even tend at the ſame time to retard it. But perhaps one of the beſt recipe's for this end, is that of M. Patin, *viz.* abſtinence from all medicines.

AGONYCLITÆ, or AGONYCLITES, in church-hiſtory, a ſect of chriſtians, in the ſeventh century, who prayed always ſtanding, as thinking it unlawful to kneel.

The word is greek, of the above import.

AGORANOMUS, αγορανομος, in grecian antiquity, a magiſtrate of Athens who had the regulation of weights and meaſures, of the prices of proviſions, *&c.*

The agoranomes anſwered in part to the ædile of the Romans. See ÆDILE.

Some make the agoranomi only ten in number, five to the city, and as many to the pyreus; whereas others make them fifteen.

AGRA, a city of the hither India, and capital of a kingdom of the ſame name. It is ſituated on the river Jemma, and is a large, populous, and beautiful city, where the mogul frequently reſides.

AGRAM, a city and biſhop's ſee of Hungary, ſituated near the frontiers of Carniola.

AGRARIAN, in a general ſenſe, denotes ſome-

ſomething belonging to, or connected with, lands. Thus,

Agrarian ſtations, *agrariæ ſtationes*, in the roman art of war, were a kind of advanced guards, poſted in the fields.

AGRARIAN *laws*, among the ſame people, thoſe relating to the diviſion and diſtribution of lands; of which there were a great number, but that called the *agrarian law*, by way of eminence, was publiſhed by Spurius Caſſius, about the year of Rome 268, for dividing the conquered lands equally among all the citizens, and limiting the number of acres which each citizen might enjoy.

Harrington, in his Oceana, thinks an agrarian law the only baſis of liberty; through the want of which, or the non-obſervance of it, the common-wealth of Rome came to ruin. He likewiſe lays down the plan of an agrarian law for England, whereby no man ſhould be allowed to poſſeſs more than 2000 *l.* a year in lands.

AGRARIUM, the ſame with agiſtment. See the article AGISTMENT.

AGREEMENT, in law, ſignifies the conſent of ſeveral perſons to any thing done, or to be done.

There are three kinds of agreement. Firſt, an agreement already executed at the beginning, as when money is paid, or other ſatisfaction made for the thing agreed to. Secondly, an agreement after an act done by another, to which a perſon agrees: this is alſo executed. Thirdly, an agreement executory, or to be executed in time to come.

An agreement put in writing does not change its nature, but if it be ſealed and delivered it becomes ſtill ſtronger, nay, any writing under hand and ſeal, or a proviſo amounting to an agreement, is equivalent to a covenant.

AGRESSES, or OGRESSES, in heraldry, a term ſometimes uſed for pellets. See the article PELLETS.

AGRIA, a town and river of upper Hungary. The town is a biſhop's ſee, and ſituated about thirty-five miles N. E. of Buda.

AGRICULTURE, in a general ſenſe, denotes the art of rendering the earth fertile, by tillage and culture.

In which ſenſe, it comprehends gardening, as well as huſbandry. See the articles GARDENING and HUSBANDRY.

AGRICULTURE is more particularly uſed for the management of arable lands, by ploughing, fallowing, manuring, &c. See the article PLOUGHING, &c.

Agriculture is a no leſs honourable than profitable art, held in the higheſt eſteem among the antients, and equally valued by the moderns.

The Egyptians aſcribed the invention of agriculture to Oſiris, the Greeks to Ceres and her ſon Triptolemus, and the Italians to Saturn or Janus. But the Jews, with more reaſon, aſcribe this honour to Noah, who, immediately after the flood, ſet about tilling the ground and planting vineyards.

Agriculture has been the delight of the greateſt men. We are told, that Cyrus the younger planted and cultivated his garden, in a great meaſure, with his own hands; and it is well known, that the Romans took many of their beſt generals from the plough.

But not to detain the reader with a needleſs encomium of this univerſally admired art, we ſhall here ſubjoin its principal branches, which will be treated of under their reſpective articles.

Agriculture, then, may be ſubdivided into the proper management, 1. Of all kinds of arable lands, whether of a clayey, ſandy, loamy, or whatever other ſoil. See the articles CLAY-LANDS, SANDY-LANDS, &c.

2. Of lands employed in paſturage, whether they be meadow lands, marſhy lands, &c. See MEADOW, &c.

3. Of wood-lands, or thoſe laid out in nurſeries, plantations, foreſts, woods, &c. See the article WOOD, &c.

AGRIÆ, in natural hiſtory, an order of quadrupeds which have no teeth, but have a very long and cylindric tongue. Of this order there are only two known genera, the myrmecophaga, and the manis. See the articles MYRMECOPHAGA and MANIS.

AGRIFOLIUM, in botany, the ſame with aquifolium. See AQUIFOLIUM.

AGRIMONIA, in botany. See the article AGRIMONY.

AGRIMONOIDES, in botany, a ſpecies of agrimonia, with roſaceous flowers, which, together with their cups, are received into another funnel-faſhioned cup, fimbriated at the edges. The proper cup of the flower at length becomes a pointed, oval fruit, uſually containing only one ſeed. See plate VIII. fig. 2.

It flowers in April, comes to perfection in May, and grows in ſome mountainous parts

parts of Italy; as to its medical virtues it agrees with agrimony. See the next article.

AGRIMONY, *agrimonia*, in botany, a genus of the dodecandria digynia claſs of plants with roſaceous flowers, the cup of which at length becomes an oblong echinated fruit, containing one or two oblong ſeeds. See plate VIII. fig. 3.

Agrimony-leaves make a very pleaſant tea, ſaid to be good in the jaundice, in cachectic caſes, and in obſtructions of the liver and ſpleen. The country people alſo uſe it, by way of cataplaſm, in contuſions and freſh wounds.

AGRIPPA, a denomination given by antient as well as modern phyſicians, to children born with the feet foremoſt. See the article DELIVERY.

Notwithſtanding what ſome alledge, this kind of birth is certainly very dangerous: and, therefore, ought to be carefully avoided by the ſkilful midwife.

AGROM, in medicine, a diſorder incident to the people of the Eaſt-Indies, wherein their tongues cleave in ſeveral places.

The remedy for this diſeaſe, which they attribute to an extreme heat in the ſtomach, is to chew the black ſeeded baſilica, and to drink a chalybeated liquor, or the juice of large mint.

AGROSTEMA, in botany, a diſtinct genus of plants, according to Linnæus; but comprehended among the lychnis's by Tournefort. See the article LYCHNIS.

AGROSTIS, in botany, a genus of the triandria digynia claſs of plants, the calyx of which is compoſed of a glume, conſiſting of two valves, and incloſing a ſingle flower; it is of an acuminated figure; the corolla is alſo of an acuminated figure, and compoſed of two valves; it is ſcarce ſo long as the cup, and one of the valves is larger than the other, and ariſtated; the corolla ſerves in place of a pericarpium; it ſurrounds and every way incloſes the ſeed, which is ſingle, roundiſh, and pointed at each end.

AGROSTOGRAPHIA, among naturaliſts, ſignifies the hiſtory or deſcription of graſſes. Such is that of Scheuchzer, containing an accurate deſcription of ſeveral hundreds of ſpecies of graſs.

AGRYPNIA, in a general ſenſe, denotes much the ſame with watchfulneſs, or an inaptitude to ſleep; which is a very troubleſome ſymptom of feveriſh, and other diſorders. See the article WATCHING.

AGRYPNIA, in the greek church, the vigil of any of the greater feſtivals.

AGUE, a general name for all periodical fevers, which, according to the different times of the return of the feveriſh paroxyſm, or fit, are denominated quotidian, tertian, or quartan agues. See the article QUOTIDIAN, *&c.*

Agues are thought to be owing to a ſuppreſſion of perſpiration, as their more immediate cauſe, whether that be occaſioned by a ſoggy and moiſt air, or by putrid damps; but their *cauſa proxima* ſeems to be an actual corruption of the humours of the body.

Dr. Pringle thinks the beſt way of accounting for the periodic returns, is upon the principle of putrefaction. The heat of the body, he obſerves, varies little, and therefore the corruption produced in any of the humours muſt happen in a determinate time. If we ſuppoſe, that in the paroxyſm the more corrupted particles of the blood do not at all paſs off through the ſkin with the ſweat, but that ſome part of them are diſcharged with the bile; theſe particles coming into the inteſtines, and being from thence taken up by the lacteals, and carried into the blood, may there act as a new ferment, and occaſion a return of the fit. Thus, the corruption of the bile may be the effect of the firſt fit, and the cauſe of thoſe that enſue.

The doctor farther obſerves, that though all moiſt countries are ſubject to agues of ſome kind or other; yet if the moiſture is pure, and the ſummers are not cloſe and hot, they will moſtly appear in a regular tertian ſhape, and be eaſily cured. But if the moiſture ariſes from long ſtagnating water, in which plants, fiſhes and inſects die and rot, then the damps, being of a putrid nature, not only occaſion more frequent, but more dangerous fevers, which oftener appear in the form of quotidians, and double tertians, than that of ſingle ones.

It is remarkable, how much theſe fevers vary with the ſeaſon; for however frequent, violent, or dangerous they are in the decline of ſummer, or beginning of autumn, when the putrefaction is higheſt; yet before winter they are commonly reduced to a ſmall number, become mild, and generally aſſume a regular tertian form.

AGUEPERSE, a town of France, ſituated in the Lyonnois, about fifteen miles north of Clermont.

AGUTI, in zoology, an american quadruped

Fig. 2. AGRIMONOIDES.

Fig. 3. AGRIMONY.

Fig. 4. AHOUAI.

Fig. 5. ALEREBA.

Fig. 1. AGONUS.



T. Jefferys sculp.

BRITISH MUSEUM

druped of the rat-kind, of the ſize of the guinea-pig, which it greatly reſembles. Its hairs are rigid and gloſſy, of a mixed colour between red and brown, with more or leſs of black. Its whiſkers are like thoſe of the rabbit-kind; but like the hog, its upper chop is longer than the under one. Its upper lip is ſplit, like that of the hare. Its tail is very ſhort, the eyes are prominent, and the legs are altogether or almoſt naked. See plate IX. fig. 6.

AHOUAI, in botany, the name of Tournefort for a genus of plants, called by Linnæus cerbera; the flower of which conſiſts of one infundibuli-form or funnel-faſhioned leaf; and its fruit, which ſomewhat reſembles a pear, contains a triagonal kernel. See plate VIII. fig. 4. and the article CERBERA.

AHUYS, a ſea-port town of Sweden, in the province of Gothland, ſituated in E. longitude 14°. and N. longitude 56°.

AJAZZO, the name of two towns, the one in the iſland of Corſica, and the other in leſſer Aſia, about fifty miles weſt of Aleppo.

AID, in a general ſenſe, denotes any kind of aſſiſtance given by one perſon to another.

AID, or AYDE, in law, denotes a petition made in court to call in help from another perſon, who has intereſt in land, or other thing conteſted. This is called *aid prier*, which not only ſtrengthens the party that prays for the aid, but gives the other perſon an opportunity of avoiding a prejudice that might otherwiſe accrue to his own right. Thus, a tenant for life may pray aid of the perſon in reverſion; and a city or borough, that holds a fee-farm of the king, if any thing be demanded of them, may pray for aid of the king.

AID *de-camp*, in military affairs, an officer employed to receive and carry the orders of a general. They ought to be alert in comprehending, and punctual and diſtinct in delivering them.

In the french armies, every general is allowed four aids de camp, a lieutenant-general two, and a marſhal-de-camp one.

AID-*major*, the french term for an adjutant. See the article ADJUTANT.

AID, *auxilium*, in antient cuſtoms, a ſubſidy paid by vaſſals to their lord, on certain occaſions.

Such were the aid of relief, paid upon the death of the lord meſne, to his heir; the *aid cheval*, or capital aid, due to the chief lord on ſeveral occaſions, as to make his eldeſt ſon a knight, to make up a portion for marrying his daughter; and ſo in other caſes.

Royal AID, an appellation ſometimes given to the land-tax.

AIDS, in the french cuſtoms, certain duties paid on all goods exported or imported into that kingdom.

Court of AIDS, in France, a ſovereign court eſtabliſhed in ſeveral cities, which has cognizance of all cauſes relating to the taxes, gabels, and aids.

AIDS, in the manege, are the helps or aſſiſtances, by which the horſeman contributes towards the motion or action required of the horſe, by a diſcreet uſe of the bridle, caveſon, ſpur, poinſon, rod, calf of the leg, and voice.

The inner heel, inner leg, inner rein, *&c.* are called inner aids; as the outer heel, the outer leg, outer rein, *&c.* are called outer aids.

AIEREBA, in ichthyology, a fiſh of the *paſtinacha marina* kind, the body of which is of a regular oval or round ſhape, and its head placed far within the verge of the thin part. See plate VIII. fig. 5.

AIGUISCE', AIGUISSE', or EGUISCE', in heraldry, denotes a croſs with its four ends ſharpened, but ſo as to terminate in obtuſe angles.

It differs from the croſs fitchée, in as much as the latter goes tapering by degrees to a point, and the former only at the ends.

AILE, or AIEL, in law, a writ which lies where a perſon's grand-father, or great-grand-father being ſeiſed of lands, *&c.* in fee-ſimple the day that he died, and a ſtranger abates or enters the ſame day, and diſpoſſeſſes the heir of his inheritance.

AILESBURY, the county-town of Buckinghamſhire, ſituated near the Thames, about forty four miles weſt of London. It ſends two members to parliament, and gives the title of earl to the noble family of Bruce. W. longitude 40'. N. latitude 51°. 40'.

AIR. *aër*, in phyſiology, a thin elaſtic fluid, ſurrounding the globe of the earth. It is no eaſy taſk to aſcertain the nature and origin of air, as being a fluid imperceptible to all our ſenſes, except that of feeling. Indeed, from the reſiſtance and impreſſion it makes, we know that there is ſuch a body, which every where ſurrounds our earth, and is of the utmoſt impor-

importance not only to mankind, in promoting many uſeful arts, but abſolutely neceſſary to the preſervation of animal life itſelf.

The beſt account we have of the origin of air, is that of Mr. Boyle, who ſuppoſes it to be made up of three different kinds of corpuſcles, *viz.* 1. Of thoſe numberleſs and minute particles, which, in the form of vapours or dry exhalations, aſcend from the earth, water, minerals, vegetables, animals, &c. in ſhort, of whatever ſubſtances are elevated by the celeſtial or ſubterraneous heat, and thence diffuſed into the atmoſphere. 2. Of a ſtill more ſubtile matter, conſiſting of thoſe exceedingly minute atoms, the magnetical effluvia of the earth, with other innumerable particles ſent from the bodies of the celeſtial luminaries, and cauſing, by their impulſe, the idea of light in us. 3. Of an elaſtic ſubſtance, which is the baſis of all the other parts, and conſtitutes the true eſſence of air, concerning the ſtructure of which various hypotheſes have been framed. Some have reſembled theſe elaſtic particles to the ſprings of watches coiled up, and endeavouring to reſtore themſelves; others to flocks of wool, which being compreſſed, have an elaſtic force; and others, to ſlender wires, of different ſubſtances, conſiſtences, &c. yet all ſpringy, expanſible and compreſſible.

That the air was created at firſt with the earth itſelf is not to be doubted; and that ever ſince, there has been a conſtant generation of particles of air by the mutual action of bodies upon each other, as in fermentation, and all kinds of natural and artificial chemiſtry, ſir Iſaac Newton thinks very reaſonable to ſuppoſe; and Mr. Boyle has given numerous experiments relating to the production of artificial or factitious air. See the articles FERMENTATION, DISTILLATION, &c.

Among the artificial methods of producing air, the fitteſt for practice ſeem to be fermentation, corroſion, and the diſſolution of bodies, by the boiling of water and other liquors; by the mutual action of bodies upon one another, eſpecially ſaline ones; and laſtly, by analyſing and reſolving certain ſubſtances.

It appears from the experiments made by the late learned Dr. Hales, that different bodies contain different quantities of air, from a ſixteenth to one half of their whole ſubſtance. In the following table, the firſt column ſhews the bulk of the body in cubic inches; the ſecond, its weight in grains, the third, the quantity of generated air in cubic inches; the fourth, the weight of this air in grains; and the fifth ſhews the proportion which it bears to the whole.

Subſtances.	C. Inches	Grains.	C. Inches	Grains.	Propor.
Deer's horn	1/2	241	117	33	1/7
Oyſter-ſhell	1/2	266	162	46	1/6
Heart of oak	1/2	135	108	30	1/4
Indian wheat	—	388	270	77	1/5
Peaſe	1	318	396	113	1/3
Muſtard-ſeed	—	437	270	77	1/6
Amber	1/2	135	135	38	1/3
Dry tobacco	—	142	153	44	1/3
Honey, with calx of bones	1	359	144	41	1/9
Yellow wax	1	243	54	15	1/16
Coarſe ſugar	1	373	126	36	1/10
Newcaſtle coal	1/2	158	180	51	1/3
Nitre, with calx of bones	1/2	211	90	26	1/8
Rheniſh tartar	1	443	504	144	1/3
Calculus humanus	1/4	230	516	147	1/2

Properties of AIR. Air being an univerſal and powerful inſtrument, which nature is conſtantly applying in all her works, the knowledge of its active properties is highly neceſſary not only to the chemiſt and phyſician, but to the philoſopher and divine.

1. Fluidity, then, which is one of the moſt obvious and eſſential properties of air, ſeems to be owing to the tenuity of its parts. That air is a fluid, appears from the eaſy paſſage it affords to all bodies moving in it. However, air differs from all other fluids, in being compreſſible, in its differing in denſity according to its height from the earth's ſurface, and in being incapable of fixation, at leaſt by itſelf. It is of a different denſity in every part, decreaſing from the earth's ſurface upwards; whereas other fluids are of a uniform denſity throughout. The air is therefore a fluid *ſui generis*. See the articles FLUID, COMPRESSION, CONDENSATION, CONDENSER, CONGELATION, DENSITY *of the air*, and ATMOSPHERE.

2. Gravity, another conſiderable proper

of air, may be proved from various experiments upon the air-pump; the principal of which are as follow. 1. By actually weighing it in a nice balance, where we ſhall ſee, that one gallon of air will weigh a dram very nearly. 2. By filling a glaſs tube with mercury, and inverting it in a baſon of the ſame fluid, where it will appear, that a column will be ſupported in the tube, by the ſole weight or preſſure of the air, to upwards of the height of twenty-eight inches. 3. By taking the air off the ſurface of the quickſilver in the gage of the air-pump, which then immediately riſes by the preſſure of the external air. 4. By exhauſting a receiver placed over the hole of the braſs plate on the pump, which will then be kept faſt by the preſſure of the incumbent air. Or, 5. More demonſtratively, by exhauſting a ſmall receiver under one larger, and letting in the air at once upon it, which will then be faſtened to the plate as before, though not placed over the hole. 6. By placing the hand on the open receiver, and exhauſting, the weight of the air on the hand, will be extremely ſenſible. 7. By placing a piece of thin glaſs or a bladder on the ſaid open receiver, which, when the air is a little exhauſted, will be broke into pieces by the weight of the incumbent air. 8. The air, exhauſted from a thin bottle under a receiver, and then ſuddenly let in, will, by its weight, inſtantly reduce it to very ſmall pieces. 9. By putting a piece of wood under quickſilver in the receiver, and then exhauſting the air, and letting it in again, it will, by its weight, force the quickſilver into the pores of the wood, and very ſenſibly increaſe its weight. 10. The exhauſted braſs hemiſpheres prove not only the prodigious weight of the air, but alſo the quantity thereof very exactly. 11. By exhauſting glaſs-bubbles, ſwimming in water, and letting the air in again, it will force the water into the bubbles, and make them ſink. 12. The ſyringe, with its weight deſcending in vacuo, and aſcending again upon the admiſſion of air, does very prettily prove the preſſure of the air, and the rationale of ſyringes in general. See SYRINGE, GRAVITY, &c.

That water riſes in pumps, ſiphons, and all kinds of water engines, by the preſſure of the air only, is made evident by taking off the ſaid preſſure, in the exhauſted receiver, from a baſon of mercury, which then will not riſe in the pipe o ſthe ſyringe on drawing up the piſton, as it will in the open air. See PUMP, SIPHON, FOUNTAIN, and ENGINE.

However, as the air is an heterogeneous fluid, its weight muſt vary according to its different component parts; hence an inſtrument called a barometer, has been invented to ſhew this variation. See the article BAROMETER.

3. Elaſticity, a third eſſential property of air, is alſo demonſtrable from various experiments of the like kind. 1. By the great expanſion of a ſmall quantity of air in an emptied bladder, when the air is taken off from the external parts in the receiver. 2. By the extruſion of a fluid out of a glaſs-bubble, by the expanſion of the bubble of air contained therein. 3. By the expulſion of the white and yolk of an egg through a ſmall hole in the little end, by the expanſion of the air contained in the great end; and alſo, by raiſing up the ſkin of the egg, (after the yolk is taken away, and one half of the ſhell) by the expanſion of the ſaid included bubble of air, ſo as almoſt to fill the half ſhell. 4. Glaſs-bubbles and images, filled with water, ſo as to make them juſt ſink in water, will, upon exhauſting the air from the ſurface, riſe to the top of the veſſel. 5. Alſo a bladder, filled with air, and juſt made to ſink with a weight, will, upon exhauſtion, ſoon riſe by the expanſion of the contained air. 6. Beer, cyder, water, and porous bodies do emit great quantities of air under the exhauſted receiver. 7. Fiſhes are made ſo light or buoyant, by increaſing the ſpring of the air in their bladders, that they riſe to the top of the water, and cannot again deſcend to the bottom. 8. But that curious experiment, which ſhews the force of the ſpring of the air to be equal to its weight or preſſure, is by raiſing the mercury by the expanſion of a ſmall quantity of confined air to the ſame height in an exhauſted tube above the air-pump, as that which it is raiſed to in the mercurial gage by the preſſure of the atmoſphere below it.

Mr. Boyle has determined the difference between the moſt rarified and moſt condenſed air, to be as 1 to 520000: ſince therefore, after ſo high a degree of rarefaction and condenſation, its elaſticity ſtill remains, we may fairly conclude air to be an unchangeably elaſtic, moveable fluid, conſtantly operating in, and upon all bodies, by its own peculiar vibratory motion.

Heat is found to increaſe the elaſticity of air, and cold to have a quite contrary effect: hence appears the uſe of the thermometer for indicating the various degrees of both. See THERMOMETER.

The great action of animal life, *viz.* breathing, by inſpiration and expiration of air, is owing to the preſſure and ſpring of the air conjointly, as is evident by the contraction and expanſion of a bladder in a ſmall receiver, with a bladder tied on at the bottom to repreſent the diaphragm. See the article DIAPHRAGM.

That air, paſſing through the fire and heated braſs tube, is unfit for animal reſpiration, is ſhewn by the ſudden death of any animal put into a receiver filled therewith. Alſo candles and live coals, put into this aduſt air, immediately go out. Hence the noxious and peſtilential qualities of damps and ſuffocating exhalations, ſo fatally experienced in mines and other ſubterranean places. See DAMPS, EXHALATION, and MINE.

That the different velocities, with which heavy and light bodies deſcend in the air, is owing to the air's reſiſtance only, is manifeſt from the equal velocity or ſwiftneſs with which all bodies deſcend in the exhauſted receiver, as is ſhewn in the experiment of a guinea and a feather. See the article DESCENT.

That fermentation, putrefaction, *&c.* depend on the air, and are promoted by it, is ſhewn by preſerving fruit in their natural bloom and perfection through the winter in an exhauſted glaſs. See FERMENTATION, PUTREFACTION, *&c.*

The uſe of the diving-bell depends upon the ſpring and force of the air; for ſince the ſpace, which the air takes up, is reciprocally as the power compreſſing it, it is evident, that, at the depth of thirty-three feet of water, where the preſſure of the atmoſphere is doubled, the bell will be half filled with water; at the depth of ſixty-ſix feet, it will be two thirds filled; at the depth of ninety-nine feet, it will be three-fourths filled; and ſo on. See the article DIVING-BELL.

The ſpring of the air is moſt evidently concerned in that chirurgical operation, called cupping; for which a vacuum is made by a ſyringe in the cupping-glaſs applied to that part, the ſpring of the air in the fleſh under the glaſs does ſtrongly act, and by that means cauſes the fleſh to diſtend and ſwell into the glaſs, while the preſſure of the air, on the parts without the glaſs, accelerates the motion of the blood and fluids towards the part where it is diminiſhed or taken off by the glaſs. See the article CUPPING.

From this account of the air, and its properties, many curious appearances may be underſtood.

1. Air, as a fluid body, is the vehicle of the effluvia of all odorous bodies to the organs of ſmelling; and, as a ponderous fluid, it preſſes them on the nerves of thoſe organs, with a force ſufficient to make them ſenſible. It alſo impreſſes ſapid ſubſtances upon the organs of taſte, and renders them obſervable by the ſenſes. It is alſo the inſtrument of ſound; for the undulations, cauſed in it by bodies moved by various directions, ſtrike upon the external ear, which, by a ſingular mechaniſm, communicates this notice to the nerves expanded upon the internal ear. This weight of the air alſo, by preſſing upon the ſurface of animals and vegetables, prevents a rupture of their veſſels, from the force neceſſary to circulate their juices, to which it is, as it were, a counter-balance. All theſe things are evident, becauſe, on the tops of high mountains, where the air is very rare, the ſenſes of ſmelling, taſting, and hearing are very languid. On the tops of mountains alſo the blood veſſels are very ſubject to burſt, whence frequent hæmorrhages happen to thoſe who travel to their ſummits. See the articles SMELL, TASTE, HEARING, *&c.*

2. The air, by its elaſticity, contributes greatly to the ſolution of the aliment in the ſtomachs of animals. For, when that which is contained in every part of the food is rarified and expanded by the heat it meets with in the ſtomach, it deſtroys the cohefion of the component particles, and aſſiſts in reducing it to a ſtate of fluidity. At the ſame time, as it is confined in the ſtomach, all its action muſt be determined to the aliment, which it muſt therefore act upon with great force in this rarified ſtate. See STOMACH, RAREFACTION, DIGESTION, *&c.*

3. Reſpiration, ſo neceſſary to the continuance of the animal life, is performed by means of the air. For, when the air is expelled out of the lungs, the pulmonary veſſels, through which the blood circulates from the right ventricle of the heart, and by which it is returned to the left auricle, collapſe, and are no longer pervious, till the air, ruſhing into the branches of the aſpera arteria upon the elevation of the breaſt, diſtends the lungs and

and thereby opens not only the air-veſſels, but alſo the branches of the pulmonary vein and artery, which accompany every where thoſe of the aſpera arteria. Here the air, as a heavy fluid, acts upon, compreſſes, and comminutes the blood; and, as it is elaſtic, and dilatable by heat, the action of it upon the blood in the lungs, is, by this property, rendered greater. See RESPIRATION, CIRCULATION, &c.

4. If we conſider the air in all lights, we ſhall find, that every alteration it undergoes muſt induce ſome great change on the animal machine. Thus when it is very heavy, it muſt preſs upon the ſurface of our bodies, and the internal part of the lungs, with a greater force than when it is light. It has been proved by curious obſervations, that the difference of weight, with which our bodies are preſſed by the atmoſphere, in the greateſt degree of its natural gravity, from that which we ſuſtain when it is lighteſt, amounts to 3982 ½ pounds troy-weight. Now as this difference is very great, the effects of it muſt alſo be conſiderable.

5. The different degrees of heat and elaſticity in the air muſt have effects proportionable to the cauſes upon the bodies of animals. The various contents alſo of the air muſt of courſe induce great changes, as it ſome way or other finds means to communicate the qualities it borrows from them to the blood and juices of animals. Hence it becomes the vehicle of contagion, and the propagator of diſeaſes, both epidemical and endemial, which admit of infinite variety, becauſe the alterations of the air, with reſpect to its properties, and to the innumerable combinations of bodies contained in it, are infinite. However, we may venture to conclude, that the moſt healthful is that which is ſerene and dry, and conſequently ponderous, and replete with the acid vital ſpirit.

6. It is the phyſical office and uſe of the air, to aſſiſt in raiſing the vapours and exhalations of the earth, and to ſerve as a general matrix for them; wherein they are all blended together, and fermented, or ſome way changed in their nature, ſo as to perform new offices, or recruit the vegetable, animal, and mineral kingdoms, when ſuch enriched vapours fall back again in rain or dew to the earth. See VAPOUR, RAIN, and DEW.

7. Hence may be conceived in general how all the changes, and phænomena, as meteors, exploſions, thunder, lightening, the aurora borealis, &c. happen in this great chaos of the atmoſphere, *viz.* according as floating particles of different kinds chance to meet, ſo as to form conſiderable aggregates or collections; and according as they are favoured by the requiſite degrees of heat, cold, drineſs, or moiſture. See the articles METEOR, EXPLOSION, THUNDER, &c.

As the various degrees of the heat and cold in the air is indicated by the thermometer, and its different weight, by the barometer, ſo its moiſture and drineſs is ſhewn by the hygrometer. See the article HYGROMETER.

Having conſidered the properties of the air, it is neceſſary to conſider alſo what corpuſcles are blended and contained in this heterogeneous fluid. And theſe are in reality almoſt infinite, of various natures, and entirely different in different parts of the atmoſphere. We may therefore conſider it as an univerſal chaos, in which corpuſcles of almoſt every kind, being confounded together, make up a compoſition conſiſting of the moſt different parts. For, 1. There is always, and every where, fire contained in the common air. See the article FIRE.

2. There is water contained always in the air, and in every part of it, and that in ſuch a manner, that it does not appear poſſible, by any known methods, to ſeparate the water entirely from it. Water is every moment perſpiring from every perſon in health, in an inviſible vapour. Sanctorius computes, that, in twenty-four hours time, there exhales from ſuch a perſon nearly the weight of five pounds, much the greateſt part of which is water. A vaſt quantity of aqueous ſteams muſt therefore be continually exhaling from animals of all kinds ſcattered all over the earth; and that all plants likewiſe ſend forth a dewy aqueous vapour, is a thing which has been long confirmed by obſervations; but the late learned and induſtrious Dr. Hales has, in his curious *Treatiſe of vegetable ſtatics*, reduced the vaſt quantity of aqueous vapours exhaling from plants to calculation. Dr. Halley, from obſervations made with the greateſt care and accuracy, has made it appear, that from the ſurface of the Mediterranean ſea alone, in one ſummer's day, there exhales, by the heat of the ſeaſon only, without any aſſiſtance from the

Heat is found to increaſe the elaſticity of air, and cold to have a quite contrary effect: hence appears the uſe of the thermometer for indicating the various degrees of both. See THERMOMETER.

The great action of animal life, *viz.* breathing, by inſpiration and expiration of air, is owing to the preſſure and ſpring of the air conjointly, as is evident by the contraction and expanſion of a bladder in a ſmall receiver, with a bladder tied on at the bottom to repreſent the diaphragm. See the article DIAPHRAGM.

That air, paſſing through the fire and heated braſs tube, is unfit for animal reſpiration, is ſhewn by the ſudden death of any animal put into a receiver filled therewith. Alſo candles and live coals, put into this aduſt air, immediately go out. Hence the noxious and peſtilential qualities of damps and ſuffocating exhalations, ſo fatally experienced in mines and other ſubterranean places. See DAMPS, EXHALATION, and MINE.

That the different velocities, with which heavy and light bodies deſcend in the air, is owing to the air's reſiſtance only, is manifeſt from the equal velocity or ſwiftneſs with which all bodies deſcend in the exhauſted receiver, as is ſhewn in the experiment of a guinea and a feather. See the article DESCENT.

That fermentation, putrefaction, *&c.* depend on the air, and are promoted by it, is ſhewn by preſerving fruit in their natural bloom and perfection through the winter in an exhauſted glaſs. See FERMENTATION, PUTREFACTION, *&c.*

The uſe of the diving-bell depends upon the ſpring and force of the air; for ſince the ſpace, which the air takes up, is reciprocally as the power compreſſing it, it is evident, that, at the depth of thirty-three feet of water, where the preſſure of the atmoſphere is doubled, the bell will be half filled with water; at the depth of ſixty-ſix feet, it will be two thirds filled; at the depth of ninety-nine feet, it will be three-fourths filled; and ſo on. See the article DIVING-BELL.

The ſpring of the air is moſt evidently concerned in that chirurgical operation, called cupping; for which a vacuum is made by a ſyringe in the cupping-glaſs applied to that part, the ſpring of the air in the fleſh under the glaſs does ſtrongly act, and by that means cauſes the fleſh to diſtend and ſwell into the glaſs, while the preſſure of the air, on the parts without the glaſs, accelerates the motion of the blood and fluids towards the part where it is diminiſhed or taken off by the glaſs. See the article CUPPING.

From this account of the air, and its properties, many curious appearances may be underſtood.

1. Air, as a fluid body, is the vehicle of the effluvia of all odorous bodies to the organs of ſmelling; and, as a ponderous fluid, it preſſes them on the nerves of thoſe organs, with a force ſufficient to make them ſenſible. It alſo impreſſes ſapid ſubſtances upon the organs of taſte, and renders them obſervable by the ſenſes. It is alſo the inſtrument of ſound; for the undulations, cauſed in it by bodies moved by various directions, ſtrike upon the external ear, which, by a ſingular mechaniſm, communicates this notice to the nerves expanded upon the internal ear. This weight of the air alſo, by preſſing upon the ſurface of animals and vegetables, prevents a rupture of their veſſels, from the force neceſſary to circulate their juices, to which it is, as it were, a counter-balance. All theſe things are evident, becauſe, on the tops of high mountains, where the air is very rare, the ſenſes of ſmelling, taſting, and hearing are very languid. On the tops of mountains alſo the blood veſſels are very ſubject to burſt, whence frequent hæmorrhages happen to thoſe who travel to their ſummits. See the articles SMELL, TASTE, HEARING, *&c.*

2. The air, by its elaſticity, contributes greatly to the ſolution of the aliment in the ſtomachs of animals. For, when that which is contained in every part of the food is rarified and expanded by the heat it meets with in the ſtomach, it deſtroys the cohesion of the component particles, and aſſiſts in reducing it to a ſtate of fluidity. At the ſame time, as it is confined in the ſtomach, all its action muſt be determined to the aliment, which it muſt therefore act upon with great force in this rarified ſtate. See STOMACH, RAREFACTION, DIGESTION, *&c.*

3. Reſpiration, ſo neceſſary to the continuance of the animal life, is performed by means of the air. For, when the air is expelled out of the lungs, the pulmonary veſſels, through which the blood circulates from the right ventricle of the heart, and by which it is returned to the left auricle, collapſe, and are no longer pervious, till the air, ruſhing into the branches of the aſpera arteria upon the elevation of the breaſt, diſtends the lungs, and

and thereby opens not only the air-veſſels, but alſo the branches of the pulmonary vein and artery, which accompany every where thoſe of the aſpera arteria. Here the air, as a heavy fluid, acts upon, compreſſes, and comminutes the blood; and, as it is elaſtic, and dilatable by heat, the action of it upon the blood in the lungs, is, by this property, rendered greater. See RESPIRATION, CIRCULATION, &c.

4. If we conſider the air in all lights, we ſhall find, that every alteration it undergoes muſt induce ſome great change on the animal machine. Thus when it is very heavy, it muſt preſs upon the ſurface of our bodies, and the internal part of the lungs, with a greater force than when it is light. It has been proved by curious obſervations, that the difference of weight, with which our bodies are preſſed by the atmoſphere, in the greateſt degree of its natural gravity, from that which we ſuſtain when it is lighteſt, amounts to 3982 ½ pounds troy-weight. Now as this difference is very great, the effects of it muſt alſo be conſiderable.

5. The different degrees of heat and elaſticity in the air muſt have effects proportionable to the cauſes upon the bodies of animals. The various contents alſo of the air muſt of courſe induce great changes, as it ſome way or other finds means to communicate the qualities it borrows from them to the blood and juices of animals. Hence it becomes the vehicle of contagion, and the propagator of diſeaſes, both epidemical and endemial, which admit of infinite variety, becauſe the alterations of the air, with reſpect to its properties, and to the innumerable combinations of bodies contained in it, are infinite. However, we may venture to conclude, that the moſt healthful is that which is ſerene and dry, and conſequently ponderous, and replete with the acid vital ſpirit.

6. It is the phyſical office and uſe of the air, to aſſiſt in raiſing the vapours and exhalations of the earth, and to ſerve as a general matrix for them; wherein they are all blended together, and fermented, or ſome way changed in their nature, ſo as to perform new offices, or recruit the vegetable, animal, and mineral kingdoms, when ſuch enriched vapours fall back again in rain or dew to the earth. See VAPOUR, RAIN, and DEW.

7. Hence may be conceived in general how all the changes, and phænomena, as meteors, exploſions, thunder, lightening, the aurora borealis, &c. happen in this great chaos of the atmoſphere, *viz.* according as floating particles of different kinds chance to meet, ſo as to form conſiderable aggregates or collections; and according as they are favoured by the requiſite degrees of heat, cold, drineſs, or moiſture. See the articles METEOR, EXPLOSION, THUNDER, &c.

As the various degrees of the heat and cold in the air is indicated by the thermometer, and its different weight, by the barometer, ſo its moiſture and drineſs is ſhewn by the hygrometer. See the article HYGROMETER.

Having conſidered the properties of the air, it is neceſſary to conſider alſo what corpuſcles are blended and contained in this heterogeneous fluid. And theſe are in reality almoſt infinite, of various natures, and entirely different in different parts of the atmoſphere. We may therefore conſider it as an univerſal chaos, in which corpuſcles of almoſt every kind, being confounded together, make up a compoſition conſiſting of the moſt different parts. For, 1. There is always, and every where, fire contained in the common air. See the article FIRE.

2. There is water contained always in the air, and in every part of it, and that in ſuch a manner, that it does not appear poſſible, by any known methods, to ſeparate the water entirely from it. Water is every moment perſpiring from every perſon in health, in an inviſible vapour. Sanctorius computes, that, in twenty-four hours time, there exhales from ſuch a perſon nearly the weight of five pounds, much the greateſt part of which is water. A vaſt quantity of aqueous ſteams muſt therefore be continually exhaling from animals of all kinds ſcattered all over the earth; and that all plants likewiſe ſend forth a dewy aqueous vapour, is a thing which has been long confirmed by obſervations; but the late learned and induſtrious Dr. Hales has, in his curious *Treatiſe of vegetable ſtatics*, reduced the vaſt quantity of aqueous vapours exhaling from plants to calculation. Dr. Halley, from obſervations made with the greateſt care and accuracy, has made it appear, that from the ſurface of the Mediterranean ſea alone, in one ſummer's day, there exhales, by the heat of the ſeaſon only, without any aſſiſtance from the

the wind, 52,800,000,000 tons of water. Hence the origin of ſprings and rivers. See the articles WATER, PERSPIRATION, SPRINGS, SEA, &c.

3. All the parts that we can obſerve in vegetables, are continually changing, and diſperſed throughout the atmoſphere. That the ſpirits of vegetables do always, and every where, exhale, and fill the air with a continual fragrance, no body can diſpute. And it is very certain, that the odour of plants, diſperſed through the vaſt tracks of air, often informs the mariners, before they diſcover land, of their approach to the ſhore. Hence then it follows, that whatever odoriferous ſpirits are at any time by nature produced in plants, all theſe are certainly, at length, contained in the air alone.

4. If we enquire whether the parts of animals are contained alſo in the air, we ſhall find there is a great quantity of exhaling ſpirits; and thoſe wholly peculiar to every animal, that are continually diſſipated and carried into the air from living animals, and adhere to other bodies; and by means of theſe ſpirits it is, that dogs, which purſue by ſcent, diſtinguiſh ſo accurately the animals from which they exhale; and how full the air is frequently of effluvia, exhaling from animals, appears evident from the infection too often obſervable in contagious diſtempers.

5. Foſſils are likewiſe diſcoverable in the air; for all foſſile-ſalts, however fixed, at laſt fly off in the air, if they are diſſolved in water, (eſpecially in that which they attract from the air) and are afterwards digeſted for a long time in a putrifying heat, then diſtilled with a great degree of fire, their reſiduum calcined in a ſtrong open fire, and then diſſolved in the air again. Do not the chemiſts convert, by different methods, many thouſand pounds weight of ſuch ſalt into acid volatile fumes, which they call ſpirit? And does not every ſuch chemical operation infect the very air? With regard to the principles, which are termed ſulphurs, theſe, whenever the foſſils are burnt, are entirely carried into the air, and, being intermixed with it, diſappear; the ſaline acid part changing into a ſuffocating fume, and the oleaginous part being attenuated by the action of the flame, and flying off in an inviſible or ſooty black vapour. It is very certain, that hardly any thing at all of theſe parts remains in the earth. Sulphur now itſelf, when alone, is carried into the air in form of an impalpable powder, and is there diſperſed about.

6. Metals themſelves have been found to be ſo far changed, that even thoſe, under a new form of a volatile fume, have been elevated and ſcattered in the air. This is univerſally known to be true of mercury, which, agitated only by a fire of 600 degrees, flies off, and becomes inviſible. And if the air, impregnated with it, ſurrounds, and is applied to, a human body, how wonderfully does it penetrate it, and how quickly does it raiſe a ſalivation! But beſides, while it thus flies off, it carries up and bears away with it ſome part of certain metals; as appears from the diſtillation of lead and tin with mercury. If we examine into the manner in which nature operates, according to the laws which the great Creator has ordained, we ſhall plainly diſcover that this air is the grand, efficacious, and neceſſary inſtrument which nature univerſally employs in almoſt all the operations ſhe is perpetually engaged in. For in this, bodies of all kinds are placed; in this they move; and in this they perform all their actions, as well thoſe which proceed from their particular and private natures, as thoſe which depend upon their relation to other bodies. There is ſcarcely any liquid, as appears by experiment, which has not air intermixed with it; ſcarcely any ſolid out of which it may not be extracted by art. So that it is ſcarce poſſible to ſpecify any operation of nature, which happens without the aſſiſtance of air, or utterly excluſive of it: the operations of the loadſtone, gravity, and the particular attraction and repulſion of corpuſcles, may perhaps be alone excepted, as capable of being performed without it; to all others it is abſolutely neceſſary. All the operations of chemiſtry, without any exception, are performed in the air. In ſhort, ſuch is the generating and vivifying power of air, that ſome of the antient philoſophers conſidered it as the firſt principle of all things. Air not only acts upon all bodies, by its common properties of weight and elaſticity, but by the peculiar virtues of the ingredients whereof it is compoſed. By means of a corroding acid it diſſolves iron and copper, unleſs well defended by oil. Even gold, in the chemiſts laboratory, when the air is impregnated with the effluvia of aqua regia, contracts a ruſt like other bodies. It fixes volatile bodies, and volatilizes

volatilizes those which are fixed. See the article ACID.

From the different effluvias, diffused thro' the air, proceed a variety of effects. Near mines of copper, it will discolour silver and brass; and in London, the air of which abounds with acid and corrosive particles, metalline utensils rust sooner than in the country. It is very difficult to obtain oil of sulphur in a clear dry air, as its parts are then more ready to evaporate; whereas, in a moist cloudy air, it may be obtained in abundance. All salts melt most readily in cloudy weather; and separations succeed best in the same state of the air. If pure wine be carried into a place where the air is full of the fumes of wine then fermenting, it will begin to ferment afresh.

AIR, in medicine, makes one of the six non-naturals, and that not the least powerful. The very life of animals depends on it, as is proved by experiments in the air-pump; most animals being unable to live in the exhausted receiver.

The wholesomness or unwholsomness of air, is certainly owing to the different effluvia with which it abounds. Lord Bacon thinks the best air is to be met with in open champaign countries; where the soil is dry, not parched or sandy, and spontaneously produces wild thyme, wild marjoram, and the like sweet-scented plants. That near rivers he thinks rather prejudicial, unless they are small, clear, and have a gravelly channel. The morning air is deemed more refreshing than that of the evening, and air agitated with breezes, than that which is serene and still.

As good air contributes greatly to health, so that which is bad is no less prejudicial to it. Stagnating air is productive of putrid and malignant disorders, as dysenteries, bilious fevers, &c; and that which is too moist, of inflammatory ones, as coughs, rheumatisms, &c. Moist and rainy seasons, however, differ widely in this respect; since in marshy countries, intense and continued heats occasion the greatest moisture in the air: whereas frequent showers, during the hot season, cool it, check the excess of vapour, dilute and refresh the corrupted stagnating water, and precipitate all noxious and putrid effluvia.

AIR, in mythology, was adored by the heathens under the names of Jupiter and Juno; the former representing the superior and finer part of the atmosphere, and the latter the inferior and grosser part. The augurs also drew presages from the clouds, thunder, lightening, &c.

AIR, in painting, &c. denotes the manner and very life of action; or it is that which expresses the disposition of the agent. See the article ACTION.

It is sometimes also used in a somewhat synonymous sense with gesture or attitude.

AIR, in music, denotes the melody proper for songs, odes, and the like; being usually quick and lively.

Sometimes it is used for the songs themselves, called by the Romans *æra*, from which the modern term air is derived.

It is an observation of lord Bacon, that airs have some affinity with the affections of the mind: thus, there are merry airs, doleful airs, warlike airs, airs inclining to pity, &c. And hence we are to account for the great influence of music. But the same author remarks, that tho' this variety of airs disposes the mind to a variety of passions conformable to them; yet, generally speaking, music feeds that disposition of the spirits which it finds.

AIRS, in the manege, are the artificial motions of taught horses, as the demi-volt; curvet, capriole, &c. See the articles VOLT, &c.

An air is defined to be a cadence and liberty of motion, accommodated to the natural disposition of the horse; making him rise with obedience, measure, and justness of time.

Some even extend the meaning of the word to the natural paces of the horse, as walking, trotting, galloping; but the more exact writers restrain it to those motions already mentioned.

AIR-BLADDER, the same with what some call the *swim*, or *swimming-bladder*; being a vesicle found in the bodies of all fishes; the cartilaginous, cetaceous, and perhaps a few other kinds excepted.

By this bladder, which is always more or less replete with air, the fish is enabled to sustain its body at any depth. Near the bottom, the great weight of the incumbent water compresses the body of the fish, or rather the inclosed air-bladder, till it becomes equiponderant with an equal bulk of water. In the middle region, where the pressure is less, the air-bladder expands; and thereby increases the bulk of the fish, without adding any thing to its weight, till it becomes equi-

ponderant

ponderant with an equal bulk of water. As the fiſh continues to riſe, the air-bladder ſtill expands and ſuſtains it.

It is highly probable, that fiſhes have a power of expanding or compreſſing the air-bladder, excluſive of the weight of the water, and by that means of riſing, or ſinking, according as they dilate or compreſs the bladder.

Some fiſhes have only a ſingle air-bladder; others, a double one; and in others, it is triple, or divided into three cells. Fiſhes which lie grovelling at the bottom, have no air-bladders; and it is remarkable, that if the air-bladder be pricked or burſt, in fiſhes naturally furniſhed with it, they immediately ſink to the bottom, from whence they can never raiſe themſelves.

AIR-GUN, a machine for exploding balls by means of condenſed air.

Authors deſcribe two kinds of this machine, *viz.* the common one, and what is called the magazine air-gun.

The common air gun is made of braſs, and has two barrels; the innermoſt one K A (See plate IX. fig. 1.) being of a ſmall bore; and the other E C D R, larger. In the ſtock of the gun there is a ſyringe S M N P; by which the air is injected into the cavity between the two barrels, through the valve E P. The ball K is put down into its place, in the ſmaller barrel, with a rammer, as in other guns. At S L is another valve, which being drawn open by the trigger O, makes way for the air to get behind the ball, ſo as to drive it out with great violence.

By opening and ſhutting this valve ſuddenly, one charge of condenſed air will anſwer for ſeveral diſcharges, which are effected by means of a lock, repreſented in fig. 2.

Magazine AIR-GUN, that repreſented in fig. 3. where ſeveral balls are ſo lodged in the cavity or magazine E D, which is of a ſerpentine form, that they may be drawn into the ſhooting barrel by means of the hammer H, repreſented in fig. 5.

To make a diſcharge, pull the trigger Z Z (fig. 3.) which throws up the ſeer *y x*, and diſengages it from the notch *x* upon which the ſtrong ſpring W W moves the tumbler T, to which the cock is fixed. The end *u* of this tumbler bears down the end of the tumbling lever R, which by its other end *m*, raiſes the flat end of the horizontal lever Q; by which means the pin P p is pulled up, and opening the valve V, diſcharges the ball: all which is evident from a bare view of the figure.

To bring another ball inſtantly to ſucceed, there is a part H, called the hammer, repreſented in fig. 4. 5. which turns the key of the cock, or circular part *a b c*, into any ſituation required. When a ball is in the gun the bore of this key coincides with that of the barrel K K, but when it is diſcharged, the hammer H is inſtantly brought down to ſhut the pan of the gun; by which motion, the bore of the key is turned into the ſituation *i k* (fig. 4.) ſo as to coincide with the orifice of the magazine; and upon lifting the gun upright, the ball next the key tumbles into its cavity, and falling behind two ſmall ſpring *s s* (fig. 3.) is by them detained. Then opening the hammer again, the ball is brought into its proper place, near the diſcharging valve, and the bore of the key again coincides with that of the ſhooting barrel.

AIR-PUMP, a machine by which the air, contained in a proper veſſel, may be exhauſted, or drawn out.

Otto de Guerick, a burgo-maſter of Magdeburg, was the firſt inventor of this curious inſtrument: which was afterwards greatly improved by Mr. Boyle, Mr. Papin, and Mr. Hawkſbee.

That commonly uſed at preſent is repreſented in plate X, where A A are the two braſs barrels, in which the piſtons C C move up and down. The braſs tube or pipe, maked H. H, is called the ſwan's neck; thro' which the air paſſes from under the receiver O O, by a ſmall hole K, in the middle of the braſs plate I I, on the top of the pump, to a braſs piece in the box D D; which being perforated lengthwiſe to the middle point under each barrel, tranſmits the air by a bladder-valve to be pumped out. The mercurial gauge, which communicates with the receiver, is marked L L L. The ſtop-cock N, ſerves to readmit the air, when there is occaſion. B is the handle, or winch for working the pump. G, G, are two pillars ſupporting the frame of the pump-wheel, which is ſcrewed upon them by the two nuts E E. As to the uſes of the other parts, they will readily be comprehended by only inſpecting the figure.

The operation of this machine depends on the elaſticity of the air: for, by working the pump, the air in the receiver will expand itſelf: by which means part of it will be forced into the barrel of the pump, to

Fig. 2.



Fig. 5.

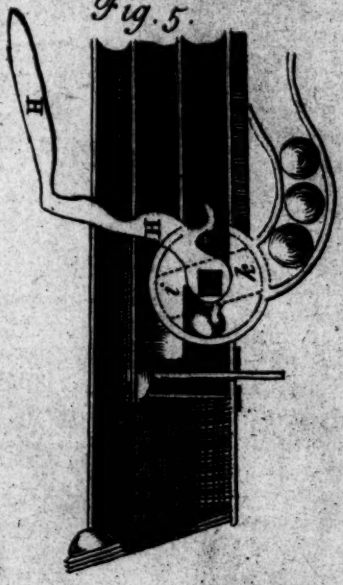


Fig. 3. Magazine-Air-Gun.

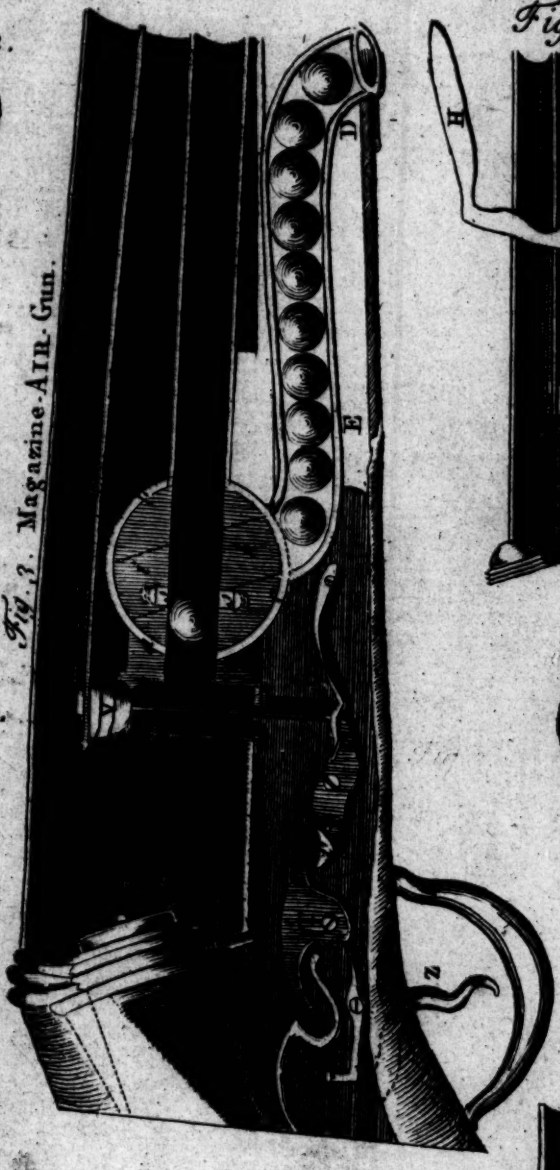


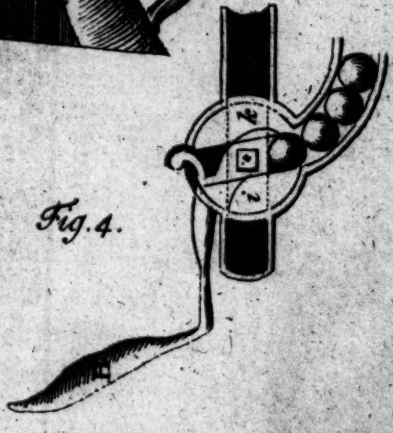
Fig. 1. Air-Gun.



Fig. 6. Agouti.



Fig. 4.

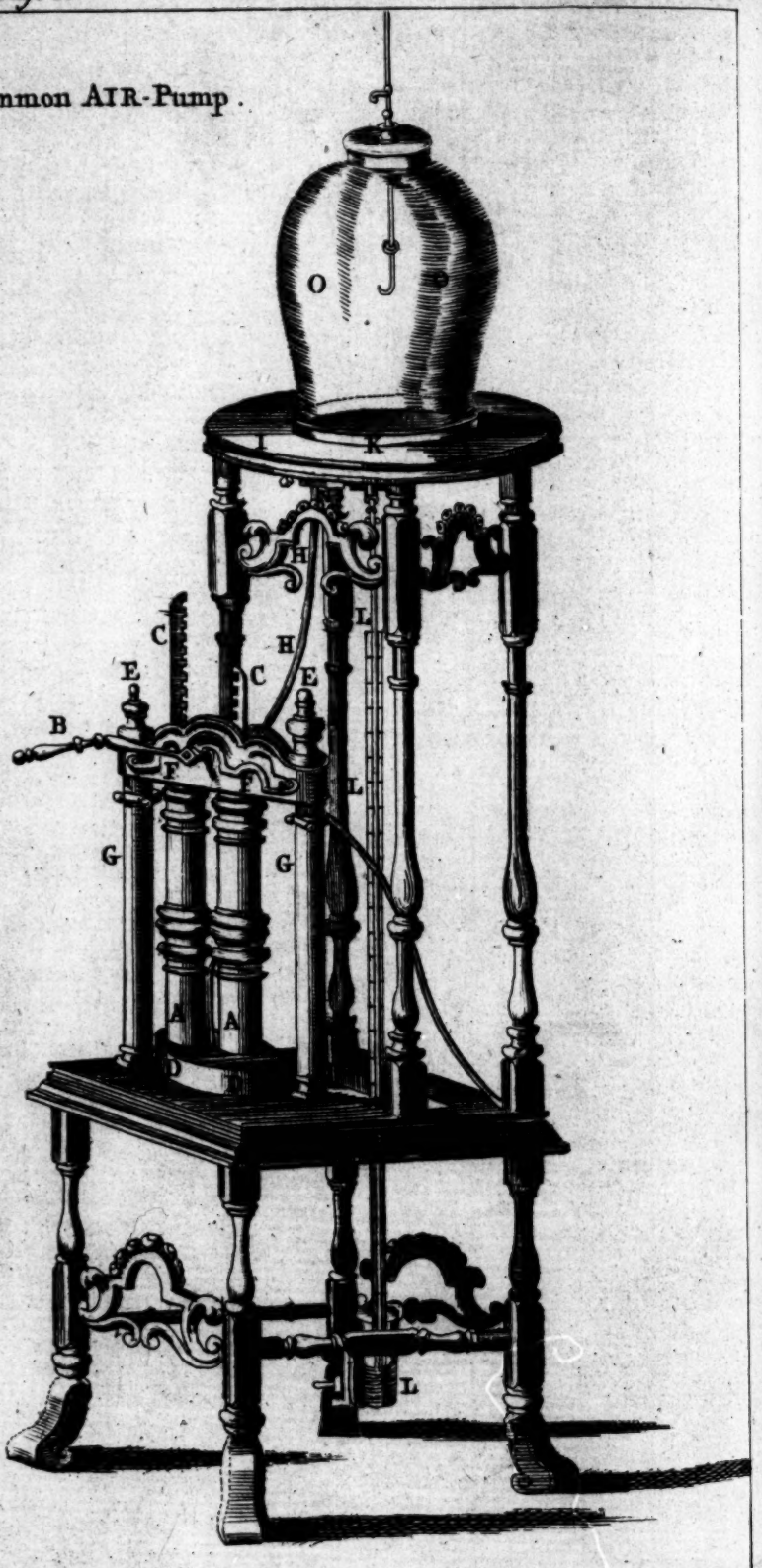


T. Jefferys sculpr.

BRITISH MUSEUM

BRITISH MUSEUM

Common AIR-Pump.



T. Jefferys sculp.

to be carried off. By thus continuing to work the pump, the air in the receiver will be gradually exhauſted; but can never be wholly drawn out, ſo as to leave a perfect vacuum within the veſſel: for it muſt be conſidered, that the air which is exhauſted, is only puſhed out by the ſpring of that which remains behind: if therefore, every particle were ſuppoſed to be exhauſted, the laſt would be expelled without an agent; or there would be an effect without a cauſe, which is abſurd.

Portable AIR-PUMP, one ſo contrived as to be eaſily carried from one place to another. Its deſcription may be ſeen in plate XI. fig. 1. where A B is the head, or part containing the wheel, which alternately raiſes and depreſſes the piſtons C, D, in the barrels E, F. On the bottom, I K L ſtands the receiver M N. The piece for carrying off the air is marked O, and communicates with the perforated braſs-piece on which the barrels ſtand, and from which they receive the air to be exhauſted. P Q is a ſmall receiver, under which is a baſon of mercury R, with a tube hermetically ſealed R S; the fall of the mercury in which tube, ſerves to indicate the degree of exhauſtion. The ſtop-cock T is deſigned to let the air again into the receiver.

Smeaton's AIR-PUMP. See the article PUMP.

AIR-SHAFTS, among miners, are holes made from the open air to meet the adits, and ſupply them with freſh air.

Theſe, when the adits are long, or exceeding thirty or forty fathom, become highly neceſſary, as well to give vent to the damps and noxious vapours, as to let in freſh air.

AIR-THREADS, in natural hiſtory, a name given to the long filaments ſo frequently ſeen in autumn floating about in the air.

Theſe threads are the work of ſpiders, eſpecially the long-legged field-ſpider; which having mounted to the ſummit of a buſh or tree, darts from its tail ſeveral of theſe threads, till at length it produces one capable of ſuſtaining it in the air: on this it mounts in queſt of prey, and frequently riſes to conſiderable heights.

When a ſpider has thus raiſed itſelf, it does not deſcend always by the ſame thread; but winding that up, it darts out another, more or leſs long, as it is intended for a higher or lower flight.

AIR-VESSELS, in plants, certain veſſels, or ducts, for imbibing and conveying air to the ſeveral parts of a plant.

That all plants contain air is certain, but that they are furniſhed with diſtinct organs, anſwering to the tracheæ and lungs of animals, has not been ſufficiently proved. Even the ingenious Dr. Hales ſpeaks doubtfully on this head, propoſing his ſentiments by way of queſtion, whether the uſe of thoſe ſpiral wreaths, coiled round the inſides of the veſſels ſuppoſed to convey the air, and manifeſt in the leaves of the vine and ſcabious, may not be to promote the quicker aſcent of air, by conforming in ſome degree to its elaſtic contortions.

AIRA, in botany, a genus of the *triandria digynia* claſs of plants, the corolla whereof is compoſed of two valves, extremely reſembling thoſe of the cup; one of theſe often produces an ariſta, near twice as long as the flower; the corolla ſerves the office of a pericarpium, and incloſes the ſeed, which is ſingle, and of an oval figure.

There are ſome ſpecies of this genus, in which male flowers are mixed with the hermaphrodite ones under the ſame common cup: in this caſe, the male flower produces an ariſta, whereas the female does not.

AIRE, in geography, the name of two towns of France, the one ſituated in the province of Gaſcony, about ſixty-five miles ſouth of Bourdeaux; and the other in Artois, about thirty miles S. E. of Calais.

AIRE is alſo a ſea-port town in Scotland, ſituated in W. longitude 4° 40′ and N. latitude 55° 30′. at the mouth of a river of the ſame name which diſcharges itſelf into the frith of Clyde.

AIRESHIRE, a county of Scotland, the capital of which is the town of Aire. It lies eaſtward of the mouth of the frith of Clyde.

AIRING, a term peculiarly uſed for the exerciſing horſes in the open air; the advantage of which to theſe noble and uſeful animals, no body will diſpute. Their maſters in this, as well as in many other reſpects, are more mindful of the health of theſe valuable creatures than of their own. It were well, if this neglect could be called a ſacrifice to public or private buſineſs; but when no ſuch cauſe can be aſſigned, would it not be highly commendable, as well as ſalutary, for gentlemen to air themſelves at the ſame time with their horſes?

AIRY, or AERY, among ſpor-

term expreſſing the neſt of a hawk or eagle.

AIRY TRIPLICITY, among aſtrologers, denotes the three ſigns Gemini, Libra, and Aquarius.

AISIAMENTA, in law, the ſame with eaſement. See the article EASEMENT.

AISNE, or AISE, a river of France, which riſes on the frontiers of Lorrain, near Clermont, and falls into the Oyſe, a little below Soiſons.

AITOCZU, a conſiderable river of leſſer Aſia, which, ariſing in the mountain Taurus, falls into the ſouth part of the Euxine ſea.

AJUGA, BUGLE, in botany, a genus of the *didynamia-gymnoſpermia* claſs of plants: the flower is monopetalous and ringent; the upper lip being ſmall, and bifid; the lower one, large and trifid: there is no pericarpium: the ſeeds are contained in the cup of the flower, and are four in number.

The flowers and leaves of bugle are ſaid to be good in fluxes, in retention of urine, and in hernias.

AJUSTING, or ADJUSTING, among eccleſiaſtical writers, the ſame with accommodation. See ACCOMMODATION.

AJUTAGE, or ADJUTAGE, a kind of tube fitted to the mouth of the veſſel, through which the water of a fountain is to be played.

To the different forms and ſtructures of adjutages, is owing the great variety of fountains. See the article FOUNTAIN.

AIX, in geography, the name of ſeveral places, *viz.* of a large city of France, the capital of Provence; of a ſmall town of Savoy, about eight miles north of Chamberry; of an iſland on the coaſt of Gaſcony, between that of Oleron and the main land; and of a village of Champagne, ſituated in the generality of Chalons.

AIX-LA-CHAPELLE, otherwiſe called *Aach*, *Ach* and *Aken*, an imperial city of Germany, in the dutchy of Juliers.

It is large and populous; being much reſorted to by foreigners as well as by Germans, on account of its hot baths.

AIZOON, in botany, a genus of the icoſandria pentagynia claſs of plants, the calyx of which is a permanent perianthium, formed of a ſingle leaf, divided into five lanceolated ſegments: there is no corolla: the fruit is a ventricoſe capſule, of a pentagonal figure, and formed into five cells: the ſeeds are numerous and roundiſh.

AKOND, in the perſian affairs, the chief judge in all caſes of contracts and other civil tranſactions. He is at the head of the lawyers, and has his deputies in all courts of the kingdom.

AL, an arabic particle prefixed to words, and ſignifying much the ſame with the engliſh particle *the*: thus they ſay alkermes, alkoran, *&c. i. e.* the kermes, the koran, *&c.*

AL, or ALD, a ſaxon term frequently prefixed to the names of places, denoting their antiquity, as Aldborough, Aldgate, *&c.*

ALA, a latin term, properly ſignifying a wing; from a reſemblance to which, ſeveral other things are called by the ſame name: thus,

ALÆ, in anatomy, is ſometimes uſed for the lobes of the liver, the nymphæ of the female pudendum, the two cartilages which form the noſtril, the arm-pits, young ſtems or branches, *&c.*

ALA, in botany, is uſed in different ſenſes; ſometimes it denotes the hollow between the ſtalk of a plant, and the leaves; ſometimes it is applied to the two ſide petals of the papilionaceous flowers, the upper petal being called the *vexillum*, and the lower one the *carina*; others uſe it for the ſlender membranaceous parts of ſome ſeeds, thence ſaid to be alated; and others, again, for the membranaceous expanſions, found on the ſtems of plants, thence denominated, alated ſtalks.

ALABASTER, *alabaſtrites*, in natural hiſtory, the name of a genus of foſſils, nearly allied to the marbles; being elegant ſtones of great brightneſs, but brittle, and not giving fire with ſteel: they ferment with acids, and readily calcine in the fire.

Naturaliſts enumerate three ſpecies of alabaſter: 1. A white kind, called *lygdinum marmor*, by the antients. 2. A yelloviſh white kind, called by the antients *phengites*. 3. A yellow and reddiſh kind, called ſimply *alabaſter* by the antients.

The laſt kind, or alabaſter of the antients, which is ſtill found in Egypt, and even in Cornwall, is an extremely beautiful ſtone; being elegantly variegated with veins of a pale reddiſh, whitiſh, or brown colour, upon a clear, pale, yellow ground, from whence it was ſometimes called *onyx*, and *onychites*.

The alabaſters are much uſed by ſtatuaries, for ſmall ſtatues, vaſes, and columns; as they cut ſmoothly, and take a beautiful poliſh. Sometimes they are employed like plaſter of Paris, after being

BRITISH MUSEUM

Fig. 1. Portable AIR-Pump.

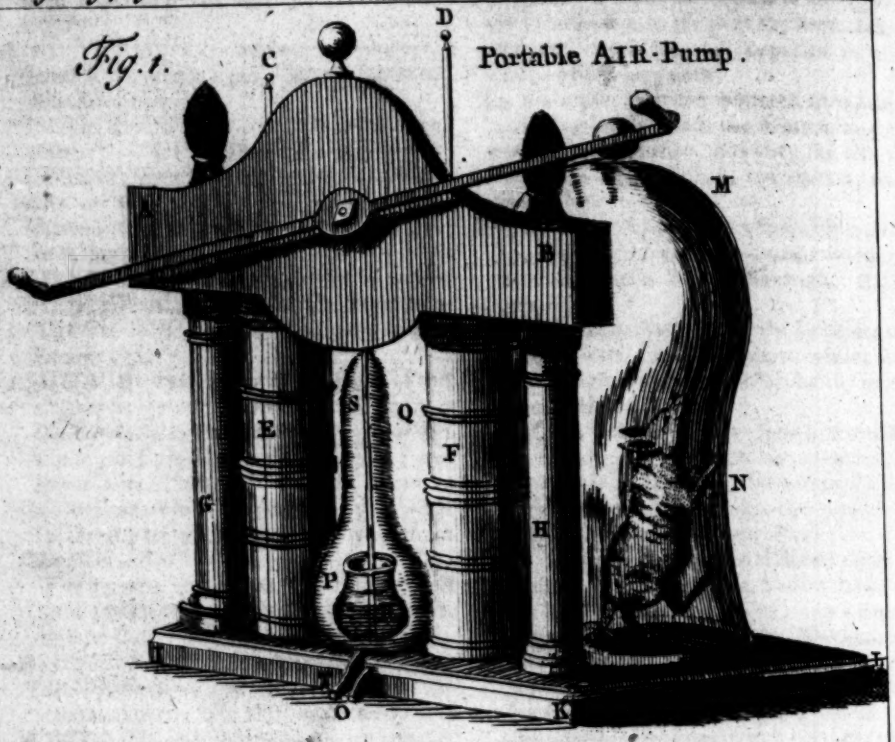


Fig. 2. ALATERNUS.



Fig. 3. ALAUDA.

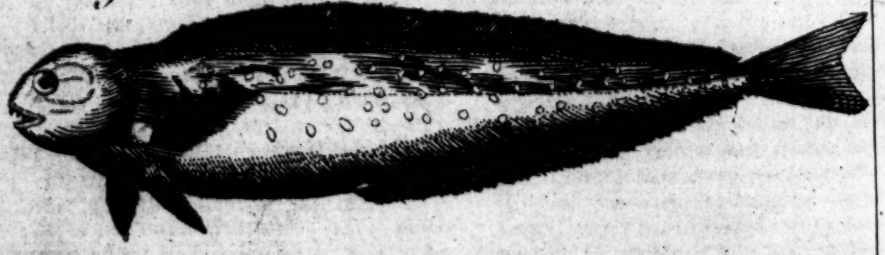


Fig. 4. ALBULA *NOBILIS.*



T. Jefferys sculp.

ing firſt calcined to a fine powder. This they mix up with water to a thin conſiſtence, caſting it in a mould, where it readily coagulates into a firm body.

ALABASTER, in antiquity, a term not only uſed for a box of precious ointment, but alſo for a liquid meaſure, containing ten ounces of wine, or nine of oil.

Some will have the alabaſter-box, mentioned in the goſpels, to have been of glaſs, and to have been called alabaſter from its holding the meaſure expreſſed by that name.

ALABASTRUM *dendroide*, the name of a ſpecies of laminated alabaſter, beautifully variegated with the figures of trees, ſhrubs, &c.

ALADULIA, in geography, the moſt eaſterly diviſion of Leſſer Aſia, comprehending the antient Cappadocia and Armenia Minor.

ALAIS, a conſiderable town of France, in the province of Languedoc, ſituated on the river Gardon, at the foot of the Cevennes.

ALALCOMENIUS, in grecian antiquity, the bœotian name of the month called by the Athenians *mæmacterion*. See the article MÆMACTERION.

ALAMIRE, or A-LA-MI-RE, among muſicians, a note of the modern ſcale of muſic. See the article SCALE.

ALAMODE, in commerce, a thin, gloſſy, black ſilk, chiefly uſed for women's hoods, and mens mourning ſcarfs.

ALAND, or ALANDT, an iſland of the Baltic ſea, ſituated between 18 and 20° eaſt longitude, and between 59 and 61° of north latitude.

ALANORARIUS, in our old cuſtoms, was a keeper of ſpaniels, ſetting-dogs, &c. for the uſe of ſportſmen.

The word is derived from *alan*, a gothic term for a greyhound.

ALARAF, among mahometans, denotes the partition-wall which ſeparates heaven from hell; though ſome uſe it in a larger ſenſe for a limbus, or middle ſtate, wherein thoſe whoſe good and evil actions exactly balance each other, enjoy neither happineſs nor miſery.

ALARBES, or ALARABES, a name given to thoſe Arabians who live in tents, and diſtinguiſh themſelves by their dreſs from the others who live in towns, than whom they pretend to be more conſiderable.

ALARES, in roman antiquity, an epithet given to the cavalry, on account of their being placed in the two wings, or alæ, of the army. Though ſome will have the term to have denoted a kind of light-armed ſoldiers, ſo called from their agility and ſwiftneſs.

ALARES *muſculi*, in anatomy, the latin name of the muſcles more uſually called *pterygoidæ*. See PTERYGOIDÆUS.

ALARM, in the military art, denotes either the apprehenſion of being ſuddenly attacked, or the notice thereof ſignified by firing a cannon, fire-lock, or the like.

Falſe alarms are frequently made uſe of to harraſs the enemy, by keeping them conſtantly under arms. Sometimes alſo this method is taken to try the vigilance of the piquet-guard, and what might be expected from them in caſe of real danger.

ALARM-BELL, that rung upon any ſudden emergency, as a fire, mutiny, or the like.

ALARM-POST, or ALARM-PLACE, the ground for drawing up each regiment, in caſe of an alarm. This is otherwiſe called the rendezvous.

ALARM is alſo the name of an inſtrument for wakening people, by making a noiſe, letting fall a weight upon them, or even pulling them. A ſimple one of this kind may be thus made: let a pack-thread, ſupporting a weight, be ſo placed againſt a candle, that it may be burnt at a certain hour; on which the weight will fall and waken the perſon.

ALATAMAHA, a large river of North America, which, riſing in the apalachian mountains, runs ſouth-eaſt, thro' the province of Georgia, and falls into the Atlantic ocean below the town of Frederica.

ALATED *leaves*, among botaniſts, thoſe made up of ſeveral pinnated ones, as in the *orobus*. See the article PINNATED.

ALATERNUS, in botany, a ſpecies of rhamnus. See the article RHAMNUS.

Its flower conſiſts of one funnel-like leaf, divided into four deep ſegments; and the fruit is a berry, containing for the moſt part three ſeeds, globoſe on one ſide, and angular on the other. See plate XI. fig. 2.

ALAUDA, the LARK, in ornithology, a diſtinct genus of birds of the order of the *paſſeres*, the characters of which are theſe: the tongue, which is membranaceous and pointed, has a rim or margin round it; the beak is ſtrait, and pointed; the two chaps equal in ſize; and the claw of the hinder toe longer than any of the other toes. See the article LARK.

ALAUDA, in ichthyology, the name by which ſome writers call ſeveral ſpecies of

blennius, particularly the mulgranoc. See plate XI. fig. 3, and the article BLENNIUS.

ALAUTA, a conſiderable river of Turky in Europe, which, after watering the north-eaſt part of Tranſylvania and part of Wallachia, falls into the Danube almoſt oppoſite to Nicopolis.

ALB, or ALBE, *alba*, in the romiſh church, a veſtment of white linen, hanging down to their feet, and anſwering to the ſurplice of our clergy. In the antient church, it was uſual with thoſe newly baptiſed, to wear an alb, or white veſtment; and hence the Sunday after eaſter was called *dominica in albis*, on account of the albs worn by thoſe baptiſed on eaſter-day.

ALBA *firma*, or ALBUM, in our old cuſtoms, denoted rent paid in ſilver, and not in corn, which was called black-mail.

ALBA *terra*, one of the many names by which alchemiſts call the philoſopher's ſtone, ſaid to be compounded of mercury and ſulphur.

ALBANI, in roman antiquity, a college of the *ſalii*, or prieſts of Mars, ſo called from mount Albanus, the place of their reſidence. See the article SALII.

ALBANIA, a province of Turky in Europe, ſituated on the eaſt-ſide of the gulph of Venice.

ALBANO, a town of Italy, in the Campagna di Roma, about twelve miles ſouth-eaſt of Rome. E. lon. 13°, N. lat. 41° 45′.

ALBANS, or ST. ALBANS, a town of Hertfordſhire, ſituated about twenty miles north-weſt of London. It returns two members to parliament, and gives the title of duke to the noble family of Beauclerc: north lat. 51° 40′.

ALBANY, a town of North America, in the province of New York, ſituated on Hudſon's river, in 74° of weſt longitude, and 43° north latitude.

ALBARA, or ALBORA, among antient phyſicians, a malignant kind of itch, approaching to the leproſy. See the articles ITCH, and LEPROSY.

ALBARAZIN, a town of Spain, in the kingdom of Aragon, ſituated upon the river Guadalavir, about one hundred and ten miles eaſt of Madrid.

ALBEMARLE, a town of France, in the province of Normandy, from whence the noble family of Keppel takes the title of earl. E. long. 2°, N. lat. 49° 45′.

ALBEMARLE is alſo the name of the moſt northerly diſtrict of North Carolina. See the article CAROLINA.

ALBENGA, a ſea-port town of Italy, ſituated on the Mediterranean ſea, about fifteen miles north-eaſt of Oneglia.

ALBIGENSES, in church hiſtory, a ſect of chriſtians, which appeared in the XIIth and XIIIth centuries. They are ranked among the groſſeſt of heretics, the manicheans, by roman catholics; from which charge proteſtants generally acquit them, though with ſome limitation. See the article MANICHEES.

At the time of the reformation, thoſe of the albigenſes who remained, embraced calviniſm. See the article CALVINISTS.

ALBION, the antient name of Britain. See the article BRITAIN.

ALBORAK, among the mahometan writers, the beaſt on which Mahomet rode, in his journies to heaven.

The Arab commentators give many fables concerning this extraordinary vehicle. It is repreſented as of an intermediate ſhape and ſize, between an aſs and a mule. A place, it ſeems, was ſecured for it in paradiſe, at the interceſſion of Mahomet; which, however, was, in ſome meaſure, extorted from the prophet, by Alborak's refuſing to let him mount him, when the angel Gabriel was come to conduct him to heaven.

ALBOURG, or ALBURG, a ſea-port town of north Jutland, in the kingdom of Denmark.

ALBRET, or ALBRIT, a ſmall town of France, in the province of Gaſcony, about thirty-five miles ſouth of Bourdeaux.

ALBUGINEA *tunica*, in anatomy, the third or innermoſt coat of the teſticles, ſo called from its white colour.

It is a ſtrong thick membrane, very ſmooth on the outer ſurface; the inner, which adheres to the ſubſtance of the teſticle, being rough and uneven. Into its upper part are inſerted blood veſſels, nerves, and lymphatics, which from thence ſend divers branches into the ſubſtance of the teſticles.

Albuginea is alſo a name ſometimes given to one of the coats of the eye, otherwiſe called *adnata*. See the article ADNATA.

ALBUGINEUS, an appellation given by ſome to the aqueous humour of the eye. See the article EYE.

ALBUGO, among phyſicians, denotes a diſtemper of the eye, cauſed by a white, denſe, and opaque ſpot growing upon the *tunica cornea*, and obſtructing the ſight. It is otherwiſe called *leucoma*. See the article LEUCOMA.

ALBULA, in ichthyology, a name given by

by different authors to very different fiſhes; particularly to the *cyprinus* with twenty bones in the belly-fin, and to ſeveral ſpecies of *coregonus*. See the articles CYPRINUS and COREGONUS.

The *albula nobilis*, or coregonus with fourteen rays in the back-fin, is repreſented in plate XI. fig. 4.

ALBUM, in antiquity, a kind of table, or regiſter, wherein the names of certain magiſtrates, public tranſactions, &c. were entered. Of theſe there were various ſorts, as the *album ſenatorum*, *album judicum*, *album prætoris*, &c.

ALBUM *græcum*, among phyſicians, denotes the white dung of dogs, ſaid to be good for inflammations of the throat; but little regarded at preſent.

ALBUM *oculi*, the white of the eye; otherwiſe called *albuginea* and *adnata*.

ALBUMEN, the term uſed by medical writers for the white of an egg. See the article EGG.

The *albumina*, or whites of eggs, are, on account of their agglutinating and cooling quality, uſed in collyriums for the eyes; alſo for burns, and in ſome mixtures with bole armoniac for freſh wounds. Boiled with any liquor, they ſerve to clarify it; for being thereby hardened, they carry off with them the groſs and feculent parts.

Diſtilling the albumen by a retort in a ſand heat, till it be brought to a dryneſs, it yields an incredible quantity of water, which has moſt of the properties of the whole maſs.

The white of an egg makes an extraordinary menſtruum. Being boiled hard in the ſhell, and afterwards ſuſpended in the air by a thread, it reſolves and drops down into an inſipid ſcentleſs liquor, which appears to be that anomalous unaccountable menſtruum, ſo much uſed by Paracelſus; and will, though it contain nothing ſharp, oleaginous, or ſaponaceous, make a thorough ſolution of myrrh; which is more than either water, oil, ſpirits, or even fire itſelf, can effect.

ALBUQUERQUE, a city of Spain, in the kingdom of Leon and province of Eſtremadura, ſituated on the frontiers of Portugal. W. long. 7°, N. lat. 39°.

ALBURN, the engliſh name of a compound colour, being a mixture of white and red, or reddiſh brown.

ALBUS *piſcis*, a name ſometimes uſed for a ſpecies of *cyprinus*, with large eyes and an acute roſtrum. See CYPRINUS.

ALBY, or ALBI, a city of France, in the province of Languedoc, ſituated in 40′ eaſt longit. and 43° 50′ north lat.

ALCA, in ornithology, a genus of birds of the order of the anſeres: the beak is of a convex and compreſſed figure; and is incurvated and furrowed in a tranſverſe direction; the feet ſtand very backward, and have each three toes.

ALCACER *de Sal*, or ALCAREZ, a town of Portugal, in the province of Eſtremadura, about forty-five miles ſouth-eaſt of Liſbon. W. long. 9°, N. lat. 38° 30′.

ALCAICS, in antient poetry, a denomination given to ſeveral kinds of verſe, from their inventor Alcæus.

The firſt kind conſiſts of five feet, *viz.* 1. a ſpondee or iambic: 2. an iambic: 3. a long ſyllable: 4. a dactyl: 5. a dactyl: ſuch is the following verſe of Horace,

Omnes | eo|dem| cogimur,| omnium
Verſatur urna, &c.

The ſecond kind conſiſts of two dactyls, and two trochees: ſuch is

Exili|um impoſi|tura | cymbæ.

Beſides theſe two, which are called dactylic alcaïcs, there is another termed ſimply alcaïc, and conſiſting of, 1. an epitrite; 2. a coriambus; 3. a coriambus; 4. a bacchius: thus,

Cur timet fla|vum Tiberim| tangere, cur|
oli|vum?

ALCAIC *ode*, a kind of manly ode, compoſed of ſeveral ſtrophes, each conſiſting of four verſes, the two firſt of which are always alcaïcs of the firſt kind; the third verſe is an iambic dimeter hypercataleƈtic, that is, it conſiſts of four feet and a long ſyllable: and the fourth verſe is an alcaïc of the ſecond kind: ſuch is the following ſtrophe of Horace, who calls this kind of poetry *minaces Alcæi camenæ*.

Non poſſidentem multa vocaveris
Rectè beatum: rectiùs occupat
Nomen beati, qui deorum
Muneribus ſapienter uti, &c.
Lib. IV. Od. ix. ver. 45.

ALCAID, ALCAYDE, or ALCALDE, in the polity of the Moors, Spaniards, and Portugueſe, a magiſtrate, or officer of juſtice, anſwering nearly to the French prevoſt, and the britiſh juſtice of peace.

The alcaid, among the Moors, is veſted with ſupreme juriſdiƈtion, both in civil and criminal caſes.

ALCALA *de Guadiara*, a town of Spain, in the province of Andaluſia, about ſix miles ſouth of Seville.

ALCALA *de Henares*, a town of Spain, in the province of New Caſtile, about ſixteen miles eaſt of Madrid.

ALCALA

ALCALA *de Real*, a city of Spain, in the province of Andaluſia, about fifteen miles north-weſt of the city of Granada.

ALCALY, or ALKALY, in chemiſtry, &c. See the article ALKALY.

ALCANNA, in commerce, a powder prepared from the leaves of the egyptian privet, in which the people of Cairo drive a conſiderable trade. It is much uſed by the turkiſh women, to give a golden colour to their nails and hair. In dying, it gives a yellow colour, when ſteeped with common water, and a red one, when infuſed in vinegar. There is alſo an oil extracted from the berries of alcanna, and uſed in medicine as a calmer.

ALCANTARA, a city of Spain, in the province of Eſtremadura, on the frontiers of Portugal. W. lon. 7°, N. lat. 39° 10′.

Knights of ALCANTARA, a military order of Spain, which took its name from the abovementioned city.

The Spaniſh antiquaries vary much in their accounts of this order. The Jeſuit Mendo fixes its origin in 1156, Barboſa in 1176. The chronicles of the order relate, that Ferdinand king of Leon took it under his protection in 1176; that pope Alexander III. confirmed it the year following; that Lucius III. in 1184, gave it the order of St. Benedict; and that Nugnez Ferdinand, in 1218, gave it the city Alcantara, from whence it took the name. Carro de Forres, and Franc. de Bades affirm, that it was at firſt called the order of St. Julian del Pereyro, from the name of the city where it was founded; but that the preciſe year of its inſtitution is not known.

The knights of Alcantara make the ſame vows as thoſe of Calatrava, and are only diſtinguiſhed from them by this, that the croſs fleurdeliſée which they bear over a large white cloak, is of a green colour: they poſſeſs thirty-ſeven commendaries. By the terms of the ſurrender of Alcantara to this order, it was ſtipulated, that there ſhould be a confraternity between the two orders, with the ſame practices and obſervances in both; and that the order of Alcantara, ſhould be ſubject to be viſited by the grand maſter of Calatrava. But the former ſoon got free from this engagement, on pretence that their grand maſter had not been called to the election of that of Calatrava, as had been likewiſe ſtipulated in the articles.

The knights of Alcantara make a very conſiderable figure in the hiſtory of the expeditions againſt the Moors.

ALCARAZ, a town of Spain, in the province of New Caſtile, ſituated on the river Guadarema, W. lon. 3°, N. lat. 38° 3′.

ALCAZAR *de Sal*, a ſmall town of Portugal, in the province of Eſtremadura, near the confines of that of Alantejo.

ALCE, the elk, in zoology. See ELK.

ALCEA, VERVAIN-MALLOW, in botany, a genus of the monadelphia polyandria claſs of plants, the calyx of which is a double perianthium; the exterior one, which is permanent, conſiſts of a ſingle patent leaf, divided into ſix ſegments; the interior is alſo permanent, and conſiſts of a ſingle leaf divided into five ſegments: the corolla conſiſts of five very large patent and emarginated petals, growing together at the baſe: the fruit is compoſed of numerous capſules, each containing a ſingle compreſſed kidney-ſhaped ſeed. See plate XII. fig. 1.

ALCHEMIST and ALCHEMY. See the articles ALCHYMIST and ALCHYMY.

ALCHIMILLA, or ALCHEMILLA, LADIES-MANTLE, in botany, a genus of the tetrandria monogynia claſs of plants, the calyx of which is a ſingle-leaved perianthium: there is no corolla, nor any pericarpium; the cup finally becomes a capſule, containing a ſingle elliptical and compreſſed ſeed. See plate XII. fig. 2.

The alchimillas are eſteemed powerful vulneraries and incraſſants: they are likewiſe ſaid to have conſiderable efficacy in ſtopping the floodings of the menſes and fluor albus; and ſome apply them externally in a *vomica pulmonum*.

ALCHYMIST, or ALCHEMIST, a perſon who profeſſes or practiſes alchymy. See the next article.

The office of alchymiſts, as aſſigned by ſome authors, is of great extent: to them it belongs to explain the principles, the properties, and qualities of all metals, and the ſeveral alterations theſe are capable of; to teach the manner of converting impure and groſs metals into gold and ſilver; to give even to precious ſtones the degree of perfection they want; to preſerve the human body in perfect vigour, and cure the moſt dangerous and deſperate deſeaſes incident thereto.

ALCHYMY, or ALCHEMY, denotes the higher or more ſecret parts of chemiſtry. See the article CHEMISTRY.

The principal objects of alchymy are theſe, 1. The making of gold. 2. An univerſal medicine, or panacea. 3. An univerſal

verſal diſſolvent, or alkaheſt. And, 4. An univerſal ferment. See the articles PANACEA, ELIXIR, and ALKAHEST.

As to the making of gold, it has been attempted three different ways, by ſeparation, by maturation, and by tranſmutation; which laſt they pretend to effect by means of the philoſopher's ſtone. See the article PHILOSOPHER'S *ſtone*.

Kircher tells us, that the antient Egyptians were great adepts in alchymy; but that they had no need to tranſmute the baſer metals into gold, as having ways to ſeparate it from all kinds of bodies, even the mud of the Nile.

Be this as it will, modern alchymiſts, who pretend to tranſmute metals into gold, are a ſet of arrant cheats: they put into a crucible the metal to be changed into gold; then ſet it on the fire, blow, and ſtir it with rods; and, after a great deal of farce, gold is at length found in the bottom of the crucible, inſtead of the matter put in. But this there are ſeveral ways of effecting without a tranſmutation of one metal into another: ſometimes it is done by ſecretly dropping in a piece of gold; ſometimes by caſting in ſome gold duſt under the appearance of ſome elixir, or the like; ſometimes a crucible is uſed with a double bottom, and gold concealed between them; ſometimes the rod, employed to ſtir the metal, is hollow, and filled with gold-duſt; and at other times ſome gold-duſt is mixed with the charcoal, the aſhes of the furnace, and the like. By ſo many ways do theſe charltons impoſe upon mankind, who are nevertheleſs ſo exceſſively credulous as to believe them.

ALCHYMY is alſo ſometimes, though in a leſs proper ſenſe, uſed for common chemiſtry. See the article CHEMISTRY.

ALCMAER, a town of north Holland, remarkable for the fine paſtures in its neighbourhood, and the great quantities of butter and cheeſe made there.

ALCMANIAN, in antient lyric poetry, a kind of verſe, conſiſting of two dactyls and two trochees, as

Virgini|bus puę|riſque |canto.

ALCOBACA, a ſmall town of Portugal, in the province of Eſtremadura: it is defended by a pretty ſtrong caſtle; but what makes it moſt remarkable is the abbey of St Bennet, which is the burying-place of moſt of the kings of Portugal.

ALCOHOL, or ALKOOL, in chemiſtry, denotes ſpirit of wine rectified by repeated diſtillations, till it has acquired the utmoſt ſubtilty and perfection of which it is capable. See the article SPIRIT.

Pure alcohol is the lighteſt of all fluids next to air; it is extremely thin, pellucid, and ſimple; it is wholly inflammable, leaving no phlegm or fæces behind. It is a great reſiſter of putrefaction, and therefore uſed to preſerve various animals, which being ſuſpended in it, will continue entire for many ages.

ALCOHOL alſo denotes a very fine impalpable powder.

ALCOHOL *martis*, filings of ſteel reduced to an impalpable powder, by turning it into ruſt with urine, then levigating it, and mixing it with a large quantity of water, that is, about a gallon, to two pounds and a half of filings. After it has ſtood a quarter of an hour, the upper part to the water is to be poured off, and evaporated to a dryneſs. The powder at the bottom is to be put into a paper, in the form of a ſugar-loaf, and waſhed, by gradually pouring in hot water, till it is freed from the urinous ſalts: with regard to the remaining groſs powder, the ſame proceſs is to be repeated over again.

To bring the gout back from the noble parts of the joints, Muſgrave has a great opinion to this remedy: he preſcribes it thus: take of alcohol martis from five to ten grains, theriaca andromachi from half a ſcruple to one dram, mix theſe with as much ſyrup of clove july-flower as is ſufficient to make a bolus. See GOUT.

ALCOHOLIZATION, among chemiſts, the proceſs of rectifying any ſpirit, or reducing it to a perfect alcohol.

Alcoholization is ſometimes uſed in a ſynonymous ſenſe with pulverization. See the article PULVERIZATION.

ALCORAN, or ALKORAN, the name of a book held equally ſacred among the mahometans as the bible is among chriſtians.

The word *alkoran* properly ſignifies reading; a title given it by way of eminence, juſt as we call the old and new teſtament *ſcriptures*.

That Mahomet was the author of the alcoran is allowed both by chriſtians and the mahometans themſelves; only the latter are fully perſuaded that it was revealed to him by the miniſtry of the angel Gabriel; whereas the former, with more reaſon, think it all his own invention, aſſiſted by one Sergius a chriſtian monk. The Alcoran is held not only of divine original, but eternal and uncreated, remaining, as ſome expreſs it, in the very eſſence of God. The firſt tranſcript has been

from everlasting by God's throne, written on a table of vast bigness, in which are also recorded the divine decrees, past and future. A copy from this table, in one volume, on paper, was sent down to the lowest heaven, in the month of Ramadan, on the night of power. From whence it was delivered out to Mahomet by parcels, some at Mecca, and some at Medina. Though he had the consolation of seeing the whole once a year, and in the last part of his life twice. Ten new chapters were delivered entire, the greater part only in separate periods, which were written down from time to time by the the prophet's amanuensis, in this or that part, of this or the other chapter, as he directed. The first parcel that was revealed, was the five first verses of the ninety-sixth chapter, which the prophet received in a cave of Mount Harah, near Mecca.

The general aim of the Alcoran was, to unite the professors of the three different religions, then followed in Arabia, Idolaters, Jews, and Christians, in the knowledge and worship of one God, under the sanction of certain laws, and the outward signs of ceremonies, partly of antient, and partly of novel institution, enforced by the consideration of rewards and punishments, both temporal and eternal, and to bring all to the obedience of Mahomet, as the prophet and embassador of God, who was to establish the true religion on earth, and be acknowledged chief pontiff in spiritual matters. The chief point therefore inculcated in the Alcoran, is the unity of God, to restore which, the prophet confessed was the chief end of his mission. The rest is taken up in prescribing necessary laws and directions, frequent admonitions to moral and divine virtues, the worship and reverence of the supreme being, and resignation to his will. One of their most learned commentators distinguishes the contents of the Alcoran, into allegorical and literal; under the former are comprehended all the obscure, parabolical, and ænigmatical passages, with such as are repealed, or abrogated; the latter, such as are clear, and in full force.

As to the book itself, as it now stands, it is divided into an hundred and fourteen *suras* or chapters, which are again divided into smaller portions or verses. But besides these divisions, mahometan writers farther divide it into sixty equal portions, called *bizb* or *bazab*, each of which they subdivide into four parts.

After the title at the head of each chapter, except the ninth, is prefixed the formula, "In the name of the most merciful God," called by the Mahometans *Bismallah*, wherewith they constantly begin all their books and writings, as the distinguishing mark of their religion.

Twenty-nine of the chapters of the Alcoran have this further peculiarity, that there are certain letters of the alphabet prefixed to them. In some a single letter; in others, two or more. These letters are supposed, by the true believers, to conceal divers profound mysteries, the understanding whereof has been communicated to no man, their prophet excepted. Yet some have pretended to find their meaning, by supposing the letters to stand for so many words, expressing the names, attributes, and works of God. Others explain these letters from the organ made use of in their pronunciation; others from their value in numbers. Thus there are five chapters, whereof one is the second, which begins with these letters, *A, L, M.* which some imagine to stand for *Allah, Latif, Magid*; God is gracious, and to be glorified. Others for *Ana, Li, Minni*; To me, and from me, *viz.* belongs all perfection, and proceeds all. Others for *Ana, Allah, Alam*; I am the most wise God. Taking the first letter to denote the beginning of the first word, the second the middle of the second, and the third the last of the third word. Others for *Allah, Gabriel, Mahomet*: the first, the author; the second, the revealer; the third, the preacher of the Alcoran. Others pretend, that as the letter *A* belongs to the lower part of the throat, the first of the organs of speech; *L* to the palate, the middle organ, and *M* to the lips, the last organ; so these letters denote, that God is the beginning, middle, and end. Others, that as the numerical value of these three letters is seventy-one, they denote, that in the space of so many years, the religion preached in the Koran shall be fully established. Golius conjectures, that these letters were put there by the copyist; for *Amar li Mahomede, i. e.* at the command of Mahomet.

The Alcoran is allowed to be written with the utmost elegance and purity of language, in the dialect of the Koreishites, the most noble and polite of all the Arabians, but with some mixture of other dialects. It is the standard of the Arabic tongue, and as the orthodox believe, and are taught by the book itself, inimitable by

by any human pen; and therefore inſiſted on a as permanent miracle, greater than that of raiſing the dead, and alone ſufficient to convince the world of its divine original; and to this miracle did Mahomet himſelf chiefly appeal, for the confirmation of his miſſion, publicly challenging the moſt eloquent ſchoolmen in Arabia, to produce a ſingle chapter comparable to it. A late ingenious and candid writer, who is a very good judge, allows the ſtyle of the alcoran to be generally beautiful and fluent, eſpecially where it imitates the prophetic manner, and ſcripture phraſe; conciſe, and often obſcure; adorned with bold figures, after the eaſtern taſte; enlivened with florid and ſententious expreſſions; and, in many places, eſpecially where the majeſty and attributes of God are deſcribed, ſublime and magnificent.

To the pomp and harmony of expreſſion ſome aſcribe all the force and effect of the alcoran; which they conſider as a ſort of muſic, equally fitted to raviſh and amaze, with other ſpecies of that art. In this Mahomet ſucceeded ſo well, and ſo ſtrangely captivated the minds of his audience, that ſeveral of his opponents thought it the effect of witchcraft and enchantment, as he himſelf complains.

So numerous are the commentaries on the alcoran, that a catalogue of their bare titles would make a volume, we have a very elegant tranſlation of it into engliſh by Mr. Sale; who has added a preliminary diſcourſe, with other occaſional notes, which the curious may conſult on this head.

Alcoran is alſo uſed, in a more limited ſenſe, for a part or chapter of the alcoran.

ALCORAN, in a figurative ſenſe, is an appellation given to any books full of impoſtures, or impiety.

ALCORAN, among the Perſians, is alſo uſed for a narrow kind of ſteeple, with two or three galleries, where the prieſts, called moravites, ſay prayers with a loud voice.

ALCORANISTS, among the mahometans, an appellation given to thoſe who adhere cloſely to the alcoran, as the ultimate rule of faith: ſuch are the Perſians, in contradiſtinction from the Turks, Arabs, &c. who admit a multitude of traditions beſides the alcoran.

ALCOVE, among builders, a receſs or part of a chamber, ſeparated by an eſtrade or partition of columns and other correſponding ornaments; in which is placed a bed of ſtate, and ſometimes ſeats to entertain company.

Theſe alcoves are frequent in Spain, and the bed raiſed two or three aſcents, with a rail at the feet.

ALCYONIUM, in botany, a genus of ſubmarine plants, conſiſting of a rigid fibroſe ſubſtance, diſpoſed in various forms, and ſometimes coated over with a crust of a ſimilar but more compact matter than the reſt.

The *alcyonia*, of which authors enumerate a great many ſpecies, have no viſible flowers nor ſeeds.

ALCYONIUM is alſo uſed for various other ſubſtances, particularly a kind of white coral, or aſtroites, frequently found foſſile in England.

ALDBOROUGH, a ſea-port town of Suffolk, which ſends two members to parliament. E. lon. 1° 40′, N. lat. 52° 20′.

ALDBOROUGH is alſo a market-town of Yorkſhire, about fifteen miles north-weſt of the city of York.

ALDEA, a town of Portugal, in the province of Eſtremadura, about ten miles ſouth of Liſbon.

ALDEBARAN, in aſtronomy, a ſtar of the firſt magnitude, called in engliſh the bull's eye, as making the eye of the conſtellation taurus.

ALDER-*tree*, the engliſh name of a genus of trees, called by botaniſts alnus. See the article ALNUS.

Alder-wood is much uſed by turners, for making houſhold furniture, ladders, &c. It will keep long in water, and therefore makes good pipes for conveying water.

Berry-bearing-ALDER, the engliſh name of the *frangula* of botanical writers. See the article FRANGULA.

ALDERAIMIN, in aſtronomy, a ſtar of the third magnitude, on the right ſhoulder of cepheus. See the article CEPHEUS.

ALDERMAN, in the britiſh policy, a magiſtrate ſubordinate to the mayor of a city, or town-corporate.

The number of theſe magiſtrates is not limited, but is more or leſs according to the magnitude of the place. In London they are twenty-ſix; each having one of the wards of the city committed to his care. Their office is for life; ſo that when one of them dies, or reſigns, a ward-mote is called, who return two perſons, one of whom the lord mayor and aldermen chooſe to ſupply the vacancy.

By the charter of the city of London, all the aldermen who have been lord mayors,

together with the three eldeſt ones not arrived at that dignity, are juſtices of the peace.

ALDERMAN, among our ſaxon anceſtors, was a degree of nobility, anſwering to earl or count at preſent.

Alderman was alſo uſed, in the time of king Edgar, for a judge or juſtice; in which ſenſe Alwin is called *aldermannus totius Angliæ*.

ALDERNEY, or AURIGNI, an iſland on the coaſt of Normandy, ſubject to the crown of Great Britain.

ALE, a fermented liquor, obtained from an infuſion of malt, and differing only from beer by having a leſs proportion of hops. See the articles BEER and BREWING.

Ale is thought to be the ſame kind of liquor with the cereviſia, zythum, and curmi of the antients.

There are ſeveral ſorts of ale, ſome prepared one way, ſome another. Pale ale is brewed of malt ſlightly dried, and is eſteemed more viſcid than brown ale, which is made of malt more highly dried or roaſted.

The annual conſumption of ale, or malt-liquors in the britiſh dominions, is very great; ſome making it amount to the value of four millions ſterling.

Medicated ALES, thoſe wherein medicinal herbs have been infuſed, or put to ferment: ſuch are the cereviſia cephalica, cereviſia epileptica, &c.

Gill-ale, or that prepared by infuſing the dried leaves of ground-ivy, is eſteemed abſterſive and vulnerary; and therefore good in diſorders of the breaſt and obſtructions of the viſcera.

ALE-BERRY, the popular name for ale that is boiled with bread and mace, ſweetened, ſtrained, and drank hot.

ALE-CONNOR, an officer in London, who inſpects the meaſures of public houſes. They are four in number, and choſen by the common-hall of the city.

ALE-SILVER, a tax paid yearly to the lord mayor of London, by all who ſell ale within the city.

ALE-MEASURE. See MEASURE.

ALEA, in roman antiquity, denotes in general all manner of games of chance; but in a more reſtricted ſenſe, was uſed for a particular game played with dice and tables, not unlike our back-gammon. See the article BACK-GAMMON.

ALECTORIA, in natural hiſtory, a ſtone ſaid to be formed in the ſtomach, liver, or rather gall-bladder of old cocks; to which old medical authors attribute a great many fabulous virtues.

ALECTOROMANTIA, in grecian antiquity, a ſpecies of divination performed by means of a cock, in the following manner: A circle being deſcribed on the ground, and divided into twenty-four equal portions, in each of theſe ſpaces was written one of the letters of the alphabet, and on each of the letters was laid a grain of wheat; after which a cock being turned looſe in the circle, particular notice was taken of the grains picked up by the cock, becauſe the letters under them being formed into a word, made the anſwer deſired.

ALEGRETTE, a town of Portugal in the province of Alentejo, ſituated on the river Caya. W. lon. 7°. 50′. N. lat. 39°.

ALEMBIC, or LEMBIC, a chemical veſſel, uſually made of copper, being an oblong roundiſh body, terminating in a ſloping tube, or roſtrum, through which the condenſed vapours paſs in diſtillation.

The alembic, properly ſpeaking, is only the upper part of an apparatus uſed for diſtilling, but ſome leſs accurate writers often uſe it to denote the whole.

Alembics are either open, that is, where the head and cucurbit make two ſeparate parts; or blind, where the capital is ſealed hermetically upon the cucurbit.

ALEMBROTH, among alchymiſts, denotes a kind of fixed alkaline ſalt, nearly allied to halonitrum and alum, and partaking of the nature of alkaheſt. See the article ALKAHEST.

Some uſe the term alembroth dæſiccatum, for ſalt of tartar. See the article TARTAR.

ALENGNER, a town of Portugal, in the province of Eſtremadura, about twenty-ſeven miles N. E. of Liſbon.

ALENTEJO, a province of Portugal, lying ſouthward of the Tagus.

ALENZON, a large city of Normandy, ſituated under the ſame meridian with London, in 48° 32′ N. latitude.

It is the capital of a dutchy of the ſame name.

ALEPPO, a large city of Aſiatic Turky, ſituated in E. longitude 37° 4′. and N. latitude 36° 30′.

It is an inland town, lying almoſt in the middle between the river Euphrates and the Levant-ſea. The chriſtians who are allowed the free exerciſe of their religion, have their houſes and churches in the ſuburbs.

The beglerbeg of Aleppo commands the whole

BRITISH MUSEUM


Fig. 1. ALCEA.
Fig. 2. ALCHIMILLA.
Fig. 3. ALGA.
T. Jefferys sculp.

whole extent of country between the Levant-ſea and the Euphrates.

ALET, or ALETH, a city of France, ſituated in the upper Languedoc at the foot of the Pyrenees, about thirty-two miles S. W. of Norbonne, E. long. 2°. N. lat. 43°. 10′.

ALEXANDRIA, a port town of Egypt, ſituated in E. longitude 31° 15′ and N. latitude 30° 40′. about fourteen miles weſtward of the moſt weſterly branch of the river Nile.

ALEXANDRIA is alſo the name of a city of Italy, ſituated on the river Tanaro, about forty miles N. W. of Genoa. E. longitude 8° 52′. N. latitude 44° 45′.

ALEXANDRIAN, or ALEXANDRIN, in poetry, a kind of verſe, conſiſting of twelve, or of twelve and thirteen ſyllables alternately; ſo called from a poem on the life of Alexander, written in this kind of verſe, by ſome french poet.

Alexandrins are peculiar to modern poetry, and ſeem well adapted to epic poems. They are ſometimes uſed by moſt nations of Europe, but chiefly by the French; whoſe tragedies are generally compoſed in Alexandrins.

ALEXIPHARMIC, among phyſicians, an appellation given to ſuch medicines as reſiſt poiſon, and correct or expel the cauſes of malignant diſorders.

Alexipharmics produce their effect chiefly by promoting perſpiration, whereby the putrid particles are carried off: they are therefore nearly allied to the diaphoretics. See the article DIAPHORETICS.

Alexipharmics agitate and attenuate the humours, on which account they are improper in all caſes where theſe are acrid or too thin; alſo in all inflammatory diſorders, unleſs adminiſtred with great caution. On the contrary, they are very ſerviceable in thoſe diſeaſes, which proceed from external cold and obſtructed perſpiration, as catarrhs, rheumatiſms, fluxes, coughs, and glandular tumours.

Alexipharmics make a large claſs of medicines, but the principal ones are theſe: 1. Of the animal kingdom, hartſhorn, bezoars, and the bones and teeth of different animals. 2. Of the vegetable kingdom, the leaves and flowers of all the aromatic plants, eſpecially ſuch as are umbelliferous. 3. Of the mineral kingdom, the different preparations of antimony, the dulcified ſpirit of vitriol with alcohol.

ALEXITERIAL, among phyſicians, a term of much the ſame import with alexipharmic; though ſometimes uſed in a ſynonymous ſenſe with amulet. See the articles ALEXIPHARMIC and AMULET.

ALFAQUES, among the Moors, the name generally uſed for their clergy, or thoſe who teach the mahometan religion, in oppoſition to the morabites, who anſwer to monks among chriſtians.

ALFELD, a town of Germany in the biſhopric of Hildeſheim, and circle of lower Saxony, ſituated about ten miles S. of Hildeſheim, in E. longitude 9° 50′, and N. latitude 52°.

ALFET, in our old cuſtoms, denotes a cauldron full of boiling water, wherein an accuſed perſon, by way of trial or purgation, plunged his arm up to the elbow.

ALGA, in botany, a genus of ſubmarine plants, called in engliſh, graſs-wreck, and compoſed of long ſlender leaves of a duſky-green colour, very much reſembling ſome kinds of graſs. See plate XII. fig. 3.

Authors enumerate ſeveral ſpecies of alga, the moſt conſiderable of which is the alga-marina, ſo much uſed in the glaſs trade. See the article GLASS.

ALGAROT, or ALGAREL, among chemiſts, an arabic term for an emetic powder, prepared from regulus of antimony diſſolved in acids, and ſeparated again by repeated lotions in lukewarm water. By evaporating two third parts of all theſe lotions, is obtained a very acid liquor, called *ſpirit of philoſophic vitriol*.

ALGARVA, the moſt ſoutherly province of the kingdom of Portugal. See the article PORTUGAL.

ALGEBRA, a general method of computation by certain ſigns and ſymbols; or it is the method of reſolving problems by means of equations. See EQUATION.

Some call algebra ſpecious, literal, or univerſal arithmetic. Others define it to be the art of reſolution and equations. Cardan calls it very juſtly, *ars magna*, the great art.

From the Arabians, the Moors and Saracens brought this art into Spain; from whence it came into England, and that before we knew any thing of Diophantus, a greek writer who publiſhed a ſyſtem of algebra about the year 800 of the chriſtian æra.

To the facility, conciſeneſs, and great extent of the algebraical method of computation, may, in a great meaſure, the modern improvements in geometry and the other branches of mathematics be aſcribed. It has, indeed, been accuſed of

obſcurity, but without reaſon; for as we have no ideas more clear or diſtinct than thoſe of numbers, it frequently happens that more ſatisfactory knowledge is obtained from computations, than from conſtructions.

The obſcurity complained of, has chiefly ariſen from the uſe of the negative ſign. See the article NEGATIVE.

Algebra is of two kinds, numeral and literal.

Numeral ALGEBRA, that wherein all the given quantities are repreſented by numbers, and only the unknown quantity expreſſed by ſome letter or other ſymbol. This is otherwiſe called vulgar algebra, and was that uſed by the antients.

Literal or ſpecious ALGEBRA, that wherein all the quantities, known as well as unknown, are expreſſed by letters of the alphabet.

This way of notation pleaſes the mind, aſſiſts the imagination, and eaſes the memory: neither is it, like the *numeral*, limited to certain kinds of problems, but ſerves equally for the inveſtigation and demonſtration of all theorems and problems both arithmetical and geometrical.

In this art, the given quantities are generally marked with the firſt Letters of the alphabet, *a*, *b*, *c*, *d*, *&c.* and the quantities ſought are diſtinguiſhed by the laſt letters, *z*, *y*, *x*, *&c.* but Harriot, and ſome others, denote the unknown quantities by vowels, and the known by conſonants.

We have a multiplicity of books on this ſubject; but thoſe of Saunderſon, Simpſon, and Maclaurin, are undoubtedly the beſt.

As to the ſeveral rules and operations of algebra, they will be treated of under their reſpective articles. See the articles ADDITION, SUBSTRACTION, *&c.*

ALGEBRAIC, or ALGEBRAICAL, denotes any thing belonging to algebra. Thus we ſay algebraical characters, algebraical curve, *&c.* See the articles CHARACTER, CURVE, *&c.*

ALGENEB, a fixed ſtar of the ſecond magnitude, on the right ſhoulder of the conſtellation Perſeus. See PERSEUS.

ALGHER, or ALGERI, a city on the north-weſt coaſt of the iſland of Sardinia, ſituated in E. longitude 8° 40′, and N. latitude 41° 30′.

ALGIERS, a kingdom of Africa, ſituated between 30 and 37 degrees of N. latitude; and between 1° W. and 9° E. longitude. It is bounded by the Mediterranean on the north, by the kingdom of Tunis on the eaſt, by mount Atlas on the ſouth, and by the river Mulvia, which ſeparates it from the empire of Morocco, on the weſt; extending 600 miles from eaſt to weſt, along the barbary coaſt.

The Turks, who are maſters of this kingdom, are but few in number in compariſon of the Moors, or natives, who have no ſhare in the government. The Arabs who live in tents are diſtinct from either. The dey of Algiers is an abſolute, tho' an elective monarch. He is choſen by the turkiſh ſoldiers only, and is frequently depoſed, or even put to death, by them.

ALGIERS is alſo the name of the capital of the above-mentioned kingdom, ſituated near the mouth of the river Safran, on the Mediterranean-ſea, oppoſite to the iſland of Majorca; its E. longitude being 3° 20′, and its N. latitude 36° 40′.

ALGOL, the name of a fixed ſtar of the third magnitude in the conſtellation Perſeus, otherwiſe called *Meduſa's head.*

ALGONQUIN, one of the two principal languages ſpoken in North America, *viz.* from the river of St. Lawrence to that of Miſſiſſippi; the other, which is called Huron, being ſpoken in Mexico.

ALGORITHM, an arabic term, not unfrequently uſed to denote the practical rules of algebra, and ſometimes for the practice of common arithmetic; in which laſt ſenſe, it coincides with *logiſtica numeralis*, or the art of numbering truly and readily.

Hence we meet with the algorithm of integers, algorithm of fractions, *&c.* See the articles INTEGER, *&c.*

ALHAMA, a ſmall town of Granada in Spain, ſurrounded with hills, and ſituated about twenty-five miles S. W. of Granada. W. lon. 4°, N. lat. 37°.

ALHIDADE, or ALIDADE, a term of arabic origin, ſignifying the index or diopter of a mathematical inſtrument for taking heights and diſtances. See the article DIOPTER.

ALHIRTO, otherwiſe called ROSTRUM GALLINÆ, in aſtronomy, a fixed ſtar of the third magnitude in the conſtellation capricorn.

ALI gives the denomination to a ſect, or diviſion, among the Mahometans, who adhere to the right of ſucceſſion of Ali, the fourth caliph, or ſucceſſor of Mahomet, and the reform of muſſelmaniſm introduced by him.

The ſectaries of Ali, are more particularly called Schiites, and ſtand oppoſed to the

the Sunnites, or ſect of Omar, who adhere to the law, as left by Mahomet, Abubeker, and Omar. Ali was couſin of Mahomet, and ſon-in-law of that prophet, having married his daughter Fatimah. After Mahomet's death, great diſputes aroſe about the ſucceſſion; many ſtood for Ali, but Abubeker was preferred, and elected the firſt caliph. Ali took his turn, after the death of Othman.

The Perſians are the chief adherents to the ſect of Ali, whom they hold to have been the legitimate ſucceſſor of Mahomet, and Abubeker an uſurper. On the contrary, the Turks are of the ſect of Omar, and hold Ali in execration, having raiſed a furious civil war among the muſſulmen.

ALICANT, a large ſea-port town of Spain, in the province of Valencia, with a very ſtrong caſtle. It is ſituated in W. longit. 30′ and N. latitude 38° 35′.

ALIEN, in law, a perſon born in a ſtrange country, not within the king's allegiance, in contradiſtinction from a denizen or natural ſubject.

An alien is incapable of inheriting lands in England, till naturalized by an act of parliament. No alien is intitled to vote in the choice of members of parliament, has a right to enjoy offices, or can be returned on any jury, unleſs where an alien is party in a cauſe; and then the inqueſt of jurors ſhall be one half denizens and the other aliens.

ALIEN-DUTY, an impoſt laid on all goods imported by aliens, over and above the cuſtoms paid for ſuch goods imported by britiſh, and on britiſh bottoms. See the article DUTY.

ALIEN-PRIORIES, a kind of inferior monaſteries, formerly very numerous in England, and ſo called from their belonging to foreign abbies.

ALIENABLE, denotes ſomething that may be alienated. See ALIENATION.

All eſtates are alienable; except thoſe in tail and for life: a bond too, with condition not to alien, is ſaid to be good.

ALIENATION, *alienatio*, in law, denotes the act of making over a man's property in lands, tenements, *&c.* to another perſon.

To *alien* or *alienate* in fee, is to ſell or convey the fee-ſimple of lands, *&c.*

Alienation, in mortmain, is making over lands, tenements, *&c.* to a body politic, or to a religious houſe, for which the king's licence muſt firſt be obtained, otherwiſe the lands, *&c.* aliened will be forfeited. See the article MORTMAIN.

Alienation of crown lands is always ſuppoſed to be made under a faculty of perpetual redemption.

A perpetual copy-hold is alſo a kind of alienation.

ALIENATION, in roman antiquity, was uſed for a father's diſcarding a ſon in his own life-time. See ABDICATION.

ALIENATION-OFFICE is that to which are carried all writs of covenants and entry upon which fines are levied, in order to have fines for alienation ſet upon them.

ALIFORMIS, in anatomy, the name of a pair of muſcles ariſing from the pterygoide bones, the proceſs of the os cuneiforme, with a beginning partly nervous, and partly fleſhy, and ending in the neck of the lower jaw towards the internal ſeat of the head.

ALIFORMIS PROCESSUS, a name ſometimes given to the prominences of the os cuneiforme. See CUNEIFORME.

ALIMENT, in a general ſenſe, whatever contributes to the nouriſhment of a body, whether animal or vegetable.

Aliment, among phyſicians, ſignifies whatever is capable of nouriſhing the human body. Aliment is either animal or vegetable, of an attenuating or incraſſating nature; and with reſpect to the taſte, is ſweet, fat, acid, aſtringent, ſalſuginous, bitter, and acrid. See DIET, FOOD, DIGESTION, and SANGUIFICATION.

Aliment ſhould always be of a lower nature than the body nouriſhed; for too near an approximation or ſimilarity of ſubſtance betwixt the aliment and the body to be nouriſhed, ſucceeds but badly.

ALIMENT is alſo ſometimes uſed in a ſynonymous ſenſe with alimony. See the article ALIMONY.

ALIMENTARY, in a general ſenſe, a term applied to whatever belongs to aliment or food.

ALIMENTARY DUCT, a name by which ſome call the inteſtines, on account of the food's paſſing through them.

Morgan in his mechanical practice of phyſic, conſiders the alimentary duct as a great gland; the lacteals being its ſecretory veſſels, and the inteſtines from the pylorus to the anus its vas expurgatorium.

Some make the alimentary duct to be the true characteriſtic of an animal. See the article ANIMAL.

Alimentary duct is ſometimes alſo uſed for the thoracic duct. See THORACIC.

ALIMENTARY CHILDREN, *alimentarii pueri*,

pueri, in roman antiquity, an appellation given to thoſe educated in houſes, not unlike our hoſpitals, erected for that purpoſe. There were likewiſe alimentary girls, *alimentariæ puellæ*, who owed their maintenance to the bounty of ſeveral empreſſes, as the boys did theirs to that of the emperors.

ALIMENTARY LAW, among the Romans, that whereby children were obliged to maintain their aged parents.

ALIMONY, *alimonia*, in law, denotes the maintenance ſued for by a wife, in caſe of a ſeparation from her huſband, wherein ſhe is neither chargeable with elopement nor adultery.

Antiently, this was recoverable only in the ſpiritual courts, but at preſent may be obtained in chancery.

ALIPILARIUS, or ALIPILUS, in roman antiquity, a ſervant belonging to the baths, whoſe buſineſs it was by means of waxen plaſters and an inſtrument called volſella, to take off the hairs from the arm pits, and even arms, legs, &c. this being deemed a point of cleanlineſs.

ALIQUANT *parts*, in arithmetic, thoſe which will not divide or meaſure the whole number exactly. Thus 7 is an aliquant part of 16, for twice 7 wants 2 of 16, and three times 7 exceeds 16 by 5.

ALIQUOT *part*, is ſuch part of a number as will divide and meaſure it exactly without any remainder. — For inſtance, 2 is an aliquot part of 4, 3 of 9, and 4 of 16.

To find all the aliquot parts of a number, divide it by its leaſt diviſor, and the quotient by its leaſt diviſor, until you get a quotient not farther diviſible, and you will have all the prime diviſors or aliquot parts of that number. Thus 60 divided by 2, gives the quotient 30, which divided by 2 gives 15, and 15 divided by 3, gives the indiviſible quotient 5. Hence the prime aliquot parts are 1, 2, 2, 3, 5; and by multiplying any two or three of theſe together, you will find the compound aliquot parts, *viz.* 4, 6, 10, 12, 15, 20, 30.

Aliquot parts muſt not be confounded with commenſurable ones; for though the former be all commenſurable, yet theſe are not always aliquot parts: thus 4 is commenſurable with 6, but is not an aliquot part of it. See the article COMMENSURABLE.

ALISMA, GREAT WATER PLANTAIN, in botany, a genus of the hexandria polygynia claſs of plants, the calyx of which is a perianthium compoſed of three oval, hollow, permanent leaves; the corolla conſiſts of three, large, roundiſh, plane, and very patent petals; the fruit conſiſts of capſules, arranged together in a roundiſh or trigonal form: the ſeeds are ſingle and ſmall.

ALITES, in roman antiquity, a deſignation given to ſuch birds as afforded matter for auguries by their flight; in which ſenſe, they are contradiſtinguiſhed from thoſe called oſcines. See OSCINES.

ALKA, in ornithology, a bird of the anſeres, or goſe-kind, about the ſize of a duck, and all over black except the breaſt and belly which are white: it is called in engliſh the awk or razor-bill. See plate XIII. fig. 1.

ALKAHEST, or ALCAHEST, among chemiſts, denotes an univerſal menſtruum capable of reſolving all bodies into their *ens primum*, or firſt matter; and that without ſuffering any change, or diminution of force by ſo doing.

Van Helmont aſſures us, in the moſt poſitive manner, that he himſelf was maſter of ſuch a menſtruum; concerning which many have been the opinions and hypotheſes of chemiſts. Some have had ſanguine expectations of finding an alkaheſt in ſea-ſalt, and mercury; others from nitre; in ſhort, there are few bodies, but ſome one or other has fixed on as the ſubject of his reſearches after this ſo much famed menſtruum. But the moſt general opinion is, that it is to be obtained from human urine. We are told, that the matter of this diſſolvent is both baſe and precious; that it coſts nothing; that all men have it in their power; that Adam carried it with him when he went out of Paradiſe; that it is concealed in the microcoſm, and very powerful in the macrocoſm; in ſhort, that it is human urine.

Paracelſus uſes no ſynonymous terms for the alkaheſt; but Helmont calls it *ignis aqua*, *ignis gehennæ*, and *ſummum et felicißimum omnium ſalium*. He adds, that it was no natural production, but ſolely to be obtained by art.

Alkaheſt, according to Starkey, is compoſed of three principles: a volatile urinous ſalt; an intermediate ſpirit, or eſſential oil of urine; and an acid nowiſe corroſive, which is nothing but the vinous ſpirit of urine. When the oily ſpirit has coagulated the ſalt, both are to be diſſolved by the vinous ſpirit, which will likewiſe unite with them by fermentation,

tion. This operation is to be repeated, till the whole becomes an entirely fiery and ſpirituous eſſence, or what is the ſame thing, a ſalt without phlegm.

Various other proceſſes are delivered, by different authors, for obtaining an alkaheſt; which, it is ſaid, will tranſmute ſtones, gems, metals, and in general, all bodies whatever, whether belonging to the animal, vegetable, or mineral kingdom, into an actual ſalt, equal in quantity to their whole bulk.

It is an obſervation of Boerhaave, that nothing in all nature is more ſurpriſing than the change of bodies attributed to the action of this menſtruum; inaſmuch as they are changed into a quite different matter, without loſing any of their virtues or weight in the operation. By means of alkaheſt, the moſt ſolid bodies, not excepting gold and gems, are ſaid to be changed into a ſaline volatile ſubſtance, which contains all their virtues, and is capable of mixing with animal fluids. In this ſtate they become potable, in the true ſenſe of the word; for what the chemiſts mean by potable gold, is only gold reduced to a ſaline and ſoluble ſubſtance, capable of circulating thro' all the veſſels of the human body.

Another equally ſurpriſing property of alkaheſt, is its being able to diſſolve all theſe bodies, without mixing with, or ſuffering any change from them; ſo that it muſt produce its effects, by only acting externally upon the ſubject.

After all, many great chemiſts have doubted whether it be poſſible to obtain ſuch an univerſal menſtruum, as the alkaheſt is repreſented to be. Thoſe who deſire a more particular account of the alkaheſt, may conſult Boerhaave's elements of chemiſtry; alſo Starkey, Pelletier, Juncker, Baldwin, &c. who have all treated of this ſubject.

ALKALI, among chemiſts and phyſicians, an appellation given to all ſubſtances which excite a fermentation when mixed with acids.

Originally the term alkali ſignified only the ſalt extracted from the aſhes of kali or glaſs-wort; afterwards, it was uſed for the ſalts of all plants, extracted in the ſame manner; and as theſe were obſerved to ferment with acids, the ſignification of the term was ſtill farther extended, ſo as to comprehend whatever ſubſtances had this effect.

Alkalies, or alkaline ſubſtances, are therefore of various and widely different kinds. Some are earthy, as quick-lime, marble, and ſealed earths; others metalline, as gold, ſilver, tin, &c. others of animal origin, as ſhells, bezoars, the calculus humanus, &c. and laſtly, all the ſtony ſubmarine plants, as coral.

Alkalies are either fixed, as ſalt of tartar, and oil of tartar *per deliquium*; or volatile, as ſpirit of hartſhorn. The fixed may be diſtinguiſhed from the volatile, as the former will give a red orange colour to a ſolution of quick-ſilver by the ſpirit of nitre; whereas the latter gives to this ſolution a white milky colour. But every alkaline ſubſtance, whether fixed or volatile, being mixed with the juices of turnſol, roſes, or violets, preſently changes their natural colours to a green. It muſt be obſerved, that no vegetables can afford an alkaline ſalt without the action of fire; on the contrary, if ſuffered to dry or rot ſpontaneouſly, they vaniſh or change their form, without leaving the leaſt fixed alkali behind. Hence we may conclude, that fixed alkaline ſalts have their nature imparted to them by fire, and not by any natural vegetable operation.

There is, however, a natural fixed alkali of the mineral kind, namely natrum, which is more common than is generally imagined, and is often found in mineral waters. Of the ſeveral kinds of fixed alkalies, the moſt common is that called by the name of pot-aſh.

The groſs lee which wines depoſite after fermentation, being preſſed dry, and burnt to aſhes, afford likewiſe a fixed alkali, which may alſo be produced from fixed nitre, from tartar and nitre mixed, and regulus of antimony.

It is evident, from repeated experiments, that all fixed alkalies are endowed with the power of attracting water, air, pure alcohol, oil and acids, though of theſe laſt, they attract ſome more ſtrongly than others.

Alkalies are uſed in medicine to reſolve and fuſe tenacious coagulations of the juices, to open obſtructions, attenuate the fluids, gently ſtimulate the ſolids, promote perſpiration, ſweat, urine, and a diſcharge of all acid humours, by means of a neutral purgative ſalt, which they form with the acid in the inteſtines.

Whether any volatile alkali exiſts in nature, without the aſſiſtance of putrefaction, or diſtillation, is not eaſy to determine; but it is certain, that both animal and vegetable ſubſtances yield theſe ſalts in

in great plenty. The moſt remarkable are animal ſalts, which may be procured by diſtillation from every animal ſubſtance, as hartſhorn, blood, ſilk, cobwebs, &c. The hypotheſis of acid and alkali was formerly in great eſteem. The patrons of this hypotheſis aſſerted that alkalies and acids were the univerſal principles of all bodies; and from hence accounted for every phænomenon of nature. But experience has demonſtrated their ſyſtem to be falſe and inſignificant. See ACID.

ALKALINE, in a general ſenſe, a term applied to all ſuch things as have the properties of an alkali. See ALKALI.

ALKALIZATION, among chemiſts and phyſicians, denotes the impregnating a liquor with alkaline ſalts.

ALKALY, the ſame with alkali. See the article ALKALI.

ALKEKENGI, WINTER-CHERRY, in botany, the name of a diſtinct genus of plants, the flower of which conſiſts of one leaf, of a rotated form, and divided into ſeveral ſegments. This is ſucceeded by a ſoft fruit, reſembling a cherry in ſhape, and containing a number of flat ſeeds. See plate XIII. fig. 2.

This genus is called by Linnæus, phyſalis, and makes one of the pentandria monogynia claſs of the ſame author.

ALKERMES, in pharmacy, a compound cordial medicine, of the form and conſiſtence of a confection. It is made of various ingredients, as roſe-water, ſugar, cinnamon, aloes-wood, &c. but the principal one is kermes. See KERMES.

ALKORAN. See the article ALCORAN.

ALL-HALLOWS, or ALL-SAINTS, a feſtival obſerved by moſt denominations of chriſtians, in commemoration of all the ſaints in general. It is kept on the firſt of November.

The number of ſaints being ſo exceſſively multiplied, it was found too burdenſome, to dedicate a feaſt day to each. In reality there were not days enough, ſcarce hours enough, in the year for this purpoſe. Hence an expedient was had recourſe to, by commemorating ſuch in the lump as had not their own days. Boniface IV. in the ninth century, introduced the feaſt of all-ſaints in Italy, which was ſoon after adopted into the other churches.

ALL SAINTS BAY, or *Baiha de todos ſanctos*, a ſpacious harbour near St. Salvador in Brazil, in ſouth America, on the atlantic ocean, W. longitude 40°. S. latitude 12°.

ALL-SOULS, a feſtival kept in commemoration of all the faithful deceaſed, on the ſecond of November.

The feaſt of all-ſouls was firſt introduced in the eleventh century, by Odilon abbot of Cluny, who enjoined it on his own order; but it was not long before it became adopted by the neighbouring churches.

ALLANTOIS, or ALLANTOIDES, in comparative anatomy, a veſicle inveſting the fœtus of ſeveral animals, as cows, ſheep, goats, &c. and filled with an urinous liquor conveyed thither from the urachus. The word allantoides is derived from αλλας, a gut, and ειδος, ſhape.

As to the exiſtence of the allantois in the human ſpecies, anatomiſts are by no means agreed; ſome contending for it, and others denying it.

Several anatomiſts, who diſpute the exiſtence of the human allantois, allow of an intermediate membrane in the human ſpecies, between the chorion and amnios, but deny it the appellation of an allantois, as holding it to differ from the allantoides of brutes, in ſtructure, as well as office. Harvey will not allow an allantois even in brutes, but fancies the allantois and the chorion to be the ſame membrane, only with two names; the firſt derived from its ſhape, the ſecond from its office. According to his opinion, the fœtus does not void any urine, but the whole is contained in the bladder, till the time of birth. Hale reſolves all theſe difficulties. Heiſter lay under the ſame incredulity with Harvey; but has lately publiſhed his recantation in form. Galen, and moſt of the antients, it is certain, not only hold the allantois and chorion for diſtinct membranes, but allow an allantois to the human fœtus; though this, it is to be obſerved, they did not ſo much from their experience of it, as from a ſuppoſed conformity between the viſcera, &c. of men, and of brutes. Hence the accounts they have left as to the figure, ſituation, &c. of the allantois, agree only to their appearance in brutes. Galen deſcribes the allantois as part of the navel-ſtring, reſembling a pudding, and reaching from one corner of the uterus to the other.

ALLAY, the ſame with alloy. See the article ALLOY.

ALLEGATION, *allegatio*, in a law ſenſe, ſignifies the producing inſtruments, or deeds, to authorize or juſtify ſomething.

ALLEGA-

ALLEGATION, in matters of literature, is the quoting an author in regard to the ſubject in hand.

ALLEGIANCE, in law, denotes the obedience which every ſubject owes to his lawful ſovereign.

Oath of ALLEGIANCE, in the britiſh policy, that taken in acknowledgment of the king, as a temporal prince; as the oath of ſupremacy acknowledges him for the ſupreme head of the church.

The oath of allegiance, taken by the people to the king, is only the counterpart to the coronation oath, taken by the king to the people, and as ſuch, partakes of the nature of a covenant; that is, is conditional, and ceaſes on a violation of the contract by the prince; at leaſt this is the doctrine of ſome of the chief advocates for the revolution. The antirevolutioners, on the contrary, hold the oath of allegiance to be abſolute and unconditional.

ALLEGORICAL, a term applied to whatever belongs to, or partakes of the nature of an allegory. See ALLEGORY.

ALLEGORY, ἀλληγορία, in matters of literature, a mode or ſpecies of writing, wherein ſomething elſe is ſignified than the words, in their literal meaning, expreſs. An allegory may be conſidered as a ſeries or chain of metaphors, continued through a whole diſcourſe. For example, when the prophets repreſent the Jews under the allegory of a vine planted, cultivated and watered by the hand of God, which inſtead of producing good fruit, brings forth verjuice and ſour grapes.

Allegories have entered into moſt religions; the jewiſh abounds with them, and it is well known that ſome philoſophers of the gentile world, undertaking to give a rational account of the many ſhocking abſurdities which the poets had introduced into their religion, found it neceſſary to maintain that theſe fictions contained myſteries, and ſignified ſomething very different from what they ſeemed to expreſs. Hence came the word allegory, or a diſcourſe that in its natural ſenſe, ἀλλο ἀγορευει, ſignifies ſome other thing than what ſeems intended to be meant.

Allegory includes parable, apologue, μυθος, or fable, and parœmia, or proverbs; at leaſt, under allegories are comprehended ſuch proverbs as are applicable to ſubjects of different kinds.

Scaliger conſiders allegory as one part, or ſide of a compariſon. It differs from irony, in that allegory imports a ſimilitude between the thing ſpoken and intended; irony a contrariety between them.

Some have allegorized, or reduced to allegory, whole ſciences, as heathen theology, mythology, antient hiſtory, poetry, coſmogony, theogony, and moſt of the wiſdom of the antients, as well as of the moderns. By the help of allegory, we find natural philoſophy in Moſes, chemiſtry in the antient poets, ſublime and ſpiritual things in low, vulgar, or groſs ones, wonderful diſcoveries in rabbinical fables, admirable ſenſe and harmony, inſtead of contradiction, blunder, and folly. Allegories have been in uſe in all ages and countries; we find them particularly among the orientals, and the Egyptians, who are ſuppoſed to have been the fathers of them. They were adopted by the antient Jews, but more by the Rabbins, and cabbaliſts of latter days. The Chriſtians borrowed the uſage very early; the primitive fathers abound with them. The Mahometans alſo give into allegory, where the literal ſenſe of the alcoran is liable to objections, particularly in the carnal account of paradiſe. The Gnoſtics, Valentinians, and Baſilidians, appear to have been great dealers in allegory; at leaſt if the conjectures of moderns be not here miſtaken, who reſolve the doctrine of the Æons, of Abraxa's, &c. into the allegorical ſyſtem.

The great ſource of allegory, or allegorical interpretations, is ſome difficulty, or abſurdity, in the literal and obvious ſenſe. —For a refuge, either to ſave the reputation of the writer, or conceal the ignorance of the commentator, recourſe is had to the expedient of allegory. The miſchief is, as there are no certain laws, or rules, whereby to conduct, moderate, and reſtrain the ſpirit of allegorizing, we find ſtrange confuſion, and endleſs diſcord the fruit of it.

Allegories are diſtinguiſhed into divers kinds: as, verbal, real, ſimple, alluſive, phyſical, moral, political, theological, &c.

ALLEGRO, in muſic, an italian word denoting that the part is to be played in a ſprightly, briſk, lively, and gay manner.

Allegros move ſwifter in triple than in common time. See the article TIME.

Piu-allegro, ſignifies that the part it is joined to, ſhould be ſung or played quicker; as

Poco piu allegro, intimates that the part to which it refers ought to be played or ſung

ſung only a little more briſkly than allegro alone requires.

ALLELUJAH, among eccleſiaſtical writers. See the article HALLELUJAH.

ALLEMAND, a ſort of grave ſolemn muſic, with good meaſure and a ſlow movement.

ALLEMANNIC, in a general ſenſe, denotes any thing belonging to the antient Germans. Thus we meet with allemannic hiſtory, allemannic language, allemannic law, *&c.*

The allemannic law, as well as language, prevailed in the more ſouthern parts of Germany, as the ſaxon law did in the northern.

ALLENDORF, a little city in the landgravate of Heſſe Caſſel, in Germany, ſituated upon the river Weſer, E. longit. 10°. N. latitude 51° 30′.

ALLER, a river which runs through the duchy of Lunenburg, and falls into the Weſer, a little below Verden.

ALLERION, or ALERION, in heraldry, a ſort of eagle without beak or feet, having nothing perfect but the wings.

They differ from martlets in that their wings are expanded, whereas thoſe of the martlet are cloſe; and denote imperialiſts vanquiſhed and diſarmed, for which reaſon they are more common in french than in german coats of arms.

ALEU, or ALLODE. See the articles ALLODIAL and ALLODIUM.

ALLEVIARE, in old records, ſignifies to levy or raiſe an accuſtomed fine or compoſition.

ALLEVIATION is the act of making a thing lighter or more eaſy to be born.

ALLEY, in gardening, a ſtrait parallel walk, bounded on both ſides with trees, ſhrubs, *&c.* and uſually covered with gravel or turf.

An alley ſhould be broad enough for two perſons to walk a-breaſt, and therefore ſhould not be leſs than five feet in width. By this it is diſtinguiſhed from a path. Some ſay, that an alley ought never to exceed fifteen feet in breadth.

Covered alley, that over which the branches of the trees meeting, form a ſhade.

Alley in ziczac, that which having too great a deſcent, is apt to be damaged by floods.

Alley of compartment, that which divides the ſquares of a parterre. See the article PARTERRE.

ALLEY, among builders, denotes a narrow paſſage leading from one place to another.

ALLEY, in perſpective, that which, in order to have a greater appearance of length, is made wider at the entrance than at the termination.

Counter alleys are little alleys by the ſides of the great ones.

ALLIANCE, in the civil and canon law, the relation contracted between two perſons or two families by marriage.

An alliance is thus contracted between the huſband and his wife's relations, between the wife and her huſband's relations, but not between the relations of the huſband and wife.

ALLIANCE is alſo uſed for a treaty entered into by ſovereign princes and ſtates, for their mutual ſafety and defence.

In this ſenſe, alliances may be diſtinguiſhed into ſuch as are offenſive, whereby the contracting parties oblige themſelves jointly to attack ſome other power; and into defenſive ones, whereby they bind themſelves to ſtand by and defend each other, in caſe they are attacked by others. Under this head too may be ranked treaties of ſubſidy.

ALLIANCE, in a figurative ſenſe, is applied to any kind of union or connection: thus we ſay, there is an alliance between the church and ſtate.

ALLIGATION, in arithmetic, is the rule of mixture, which teaches to compound ſeveral ſpecies of ingredients or commodities together, according to any intent or deſign propoſed; and is either medial or alternate.

ALLIGATION *medial* ſhews the rate or price of any mixtures, when the ſeveral quantities of the mixture, and their rates, are known.

Rule: multiply each quantity given, by the price; and then, by direct proportion, ſay, as the ſum of the quantities given, to the ſum of the products; ſo is any part of the mixture, to the value of that part.

Example: a goldſmith melts 3 oz. of gold, at 4 l. 6 s. 8 d. per ounce, with 12 oz. at 4 l. per ounce, and 8 oz. at 4 l. 5 s. per ounce: when they are all melted together, one ounce will be found to be worth 4 l. 2 s. $\frac{7}{23}$ d. Thus,

oz.		l. s. d.		l.
3	at	4 6 8	multiplied together produce	13
12		4 0 0		48
8		4 5 0		34
23	Sum			Sum 95

oz. l. oz. l. s. d.

Then as 23 : 95 :: 1 : 4 2 7 $\frac{7}{23}$ Anſw.

ALLIGATION *alternate* teaches to mix goods,

goods, of different prices, in ſuch proportion, that the mixture may be ſold for any price propoſed.

Rule: ſet down the names of the things to be mixed, together with their prices; then, finding the difference between each of theſe, and the propoſed price of the mixture, place theſe differences in an alternate order, and they will ſhew the proportion of the ingredients. Thus,

To find in what proportion rum at 10 s. the gallon, ought to be mixed with brandy at 4 s. the gallon, that the mixture may be ſold for 8 s. the gallon: firſt ſet down the rum and brandy, together with their prices, as in the margin; then finding the difference between 8, the propoſed price, and 4, the price of the brandy, place this difference, *viz.* 4. alternately, that is oppoſite to the the rum: and, after the ſame manner, place the difference between 10 and 8, *viz.* 2, oppoſite to brandy: then will 4 and 2 ſhew the proportion of the rum to the brandy, that is, there muſt be four gallons of rum for two gallons of brandy. Thoſe who are curious to have a fuller explanation of this rule, may conſult Ward, Wallis, Taquet, Malcom, and other books on arithmetic.

Rum	10—8	×	4
Brandy	4—8		2

ALLIGATOR, in zoology, a name given to the ſmaller kind of crocodiles in the Weſt-Indies. See CROCODILE.

An alligator ſmells ſo ſtrong of muſk as to affect the water and air at a conſiderable diſtance.

ALLIOTH, a ſtar in the tail of the greater bear, much uſed for finding the latitude at ſea.

ALLIUM, GARLICK, in botany, the name of a genus of plants, the characters and uſes of which ſee under GARLICK.

ALLOCATION, *allocatio*, the admitting or allowing of an article in an account, particularly in the exchequer. Hence

ALLOCATIONE FACIENDA is a writ directed to the lord treaſurer, or barons of the exchequer, commanding them to allow an accountant ſuch ſums as he has lawfully expended in the execution of his office.

ALLOCATO COMITATU, a new writ of exigent allowed, before any other county-court held, on a former not being complied with. See the article EXIGENT.

ALLODIAL, an epithet given to an inheritance held without any acknowledgment to a lord or ſuperior, in oppoſition to feudal. See the article FEUDAL.

Allodial lands are free lands, for which neither fees, rents, nor ſervices are due. See the article ALLODIUM.

ALLODIARIUS, or ALODIARIUS, in our old writers, denotes the proprietor of an allodium. See the next article.

ALLODIUM, or ALLEUD, denotes lands which are the abſolute property of their owner, without being obliged to pay any ſervice or acknowledgment whatever to a ſuperior lord; in which ſenſe they ſtand oppoſed to feudal lands, which pay a fee to ſome ſuperior.

Allodium nobile, that which had alſo civil and criminal juriſdiction annexed to it; in oppoſition to *allodium villanum*, which had no ſuch juriſdiction.

ALLOM, the ſame with alum. See the article ALUM.

ALLONGE, in fencing, denotes a thruſt or paſs at the adverſary. See PASS.

ALLOPHYLUS, in botany, a genus of the octandria monogynia claſs of plants, the calyx of which is a perianthium compoſed of four leaves of an orbicular figure, and two oppoſite ones ſmaller than the others; the corolla conſiſts of four petals leſs than the cup, of an orbicular figure, and equal one to another, with large ungues of the ſame length with the ſmaller leaves of the cup. The characters of the fruit and ſeed are not aſcertained.

ALLOTTING, or ALLOTMENT *of goods*, in commerce, is the dividing a ſhip's cargo into ſeveral parts, which are to be purchaſed by ſeveral perſons, whoſe names being written upon as many ſlips of paper, are applied by an indifferent perſon to the ſeveral lots; by which means the goods are divided without partiality, each man having the parcel upon which his name is fixed.

ALLOWANCES, at the cuſtom-houſe, to goods rated by weight, are two, *viz.* draught and tare. See the articles DRAUGHT and TARE.

ALLOWED, a word written in the margin of an account of expences over againſt ſuch articles as are admitted to be reaſonable.

ALLOY, or ALLAY, a proportion of a baſer metal mixed with a finer one. Thus all gold coin has an alloy of ſilver and copper, as ſilver coin has of copper alone; the proportion in the former caſe, for ſtandard gold, being two carrats of alloy in a pound troy of gold; and in the latter eighteen penny-weight of alloy for a pound troy of ſilver.

ſung only a little more briſkly than allegro alone requires.

ALLELUJAH, among eccleſiaſtical writers. See the article HALLELUJAH.

ALLEMAND, a ſort of grave ſolemn muſic, with good meaſure and a ſlow movement.

ALLEMANNIC, in a general ſenſe, denotes any thing belonging to the antient Germans. Thus we meet with allemannic hiſtory, allemannic language, allemannic law, *&c.*

The allemannic law, as well as language, prevailed in the more ſouthern parts of Germany, as the ſaxon law did in the northern.

ALLENDORF, a little city in the landgravate of Heſſe Caſſel, in Germany, ſituated upon the river Weſer, E. longit. 10°. N. latitude 51° 30′.

ALLER, a river which runs through the duchy of Lunenburg, and falls into the Weſer, a little below Verden.

ALLERION, or ALERION, in heraldry, a ſort of eagle without beak or feet, having nothing perfect but the wings.

They differ from martlets in that their wings are expanded, whereas thoſe of the martlet are cloſe; and denote imperialiſts vanquiſhed and diſarmed, for which reaſon they are more common in french than in german coats of arms.

ALEU, or ALLODE. See the articles ALLODIAL and ALLODIUM.

ALLEVIARE, in old records, ſignifies to levy or raiſe an accuſtomed fine or compoſition.

ALLEVIATION is the act of making a thing lighter or more eaſy to be born.

ALLEY, in gardening, a ſtrait parallel walk, bounded on both ſides with trees, ſhrubs, *&c.* and uſually covered with gravel or turf.

An alley ſhould be broad enough for two perſons to walk a-breaſt, and therefore ſhould not be leſs than five feet in width. By this it is diſtinguiſhed from a path. Some ſay, that an alley ought never to exceed fifteen feet in breadth.

Covered alley, that over which the branches of the trees meeting, form a ſhade.

Alley in ziczac, that which having too great a deſcent, is apt to be damaged by floods.

Alley of compartment, that which divides the ſquares of a parterre. See the article PARTERRE.

ALLEY, among builders, denotes a narrow paſſage leading from one place to another.

ALLEY, in perſpective, that which, in order to have a greater appearance of length, is made wider at the entrance than at the termination.

Counter alleys are little alleys by the ſides of the great ones.

ALLIANCE, in the civil and canon law, the relation contracted between two perſons or two families by marriage.

An alliance is thus contracted between the huſband and his wife's relations, between the wife and her huſband's relations, but not between the relations of the huſband and wife.

ALLIANCE is alſo uſed for a treaty entered into by ſovereign princes and ſtates, for their mutual ſafety and defence.

In this ſenſe, alliances may be diſtinguiſhed into ſuch as are offenſive, whereby the contracting parties oblige themſelves jointly to attack ſome other power; and into defenſive ones, whereby they bind themſelves to ſtand by and defend each other, in caſe they are attacked by others. Under this head too may be ranked treaties of ſubſidy.

ALLIANCE, in a figurative ſenſe, is applied to any kind of union or connection: thus we ſay, there is an alliance between the church and ſtate.

ALLIGATION, in arithmetic, is the rule of mixture, which teaches to compound ſeveral ſpecies of ingredients or commodities together, according to any intent or deſign propoſed; and is either medial or alternate.

ALLIGATION *medial* ſhews the rate or price of any mixtures, when the ſeveral quantities of the mixture, and their rates, are known.

Rule: multiply each quantity given, by the price; and then, by direct proportion, ſay, as the ſum of the quantities given, to the ſum of the products; ſo is any part of the mixture, to the value of that part.

Example: a goldſmith melts 3 oz. of gold, at 4 l. 6 s. 8 d. per ounce, with 12 oz. at 4 l. per ounce, and 8 oz. at 4 l. 5 s. per ounce: when they are all melted together, one ounce will be found to be worth 4 l. 2 s. $\frac{7}{23}$ d. Thus,

oz.	l.	s.	d.		l.
3 at	4	6	8	multiplied together produce	13
12	4	0	0		48
8	4	5	0		34
23 Sum				Sum	95

oz. l. oz. l. s. d.

Then as 23 : 95 :: 1 : 4 2 7 $\frac{7}{23}$ Anſw.

ALLIGATION *alternate* teaches to mix goods,

goods, of different prices, in ſuch proportion, that the mixture may be ſold for any price propoſed.

Rule: ſet down the names of the things to be mixed, together with their prices; then, finding the difference between each of theſe, and the propoſed price of the mixture, place theſe differences in an alternate order, and they will ſhew the proportion of the ingredients. Thus,

To find in what proportion rum at 10 s. the gallon, ought to be mixed with brandy at 4 s. the gallon, that the mixture may be ſold for 8 s. the gallon: firſt ſet down the rum and brandy, together with their prices, as in the margin; then finding the difference between 8, the propoſed price, and 4, the price of the brandy, place this difference, *viz.* 4. alternately, that is oppoſite to the the rum: and, after the ſame manner, place the difference between 10 and 8, *viz.* 2, oppoſite to brandy: then will 4 and 2 ſhew the proportion of the rum to the brandy, that is, there muſt be four gallons of rum for two gallons of brandy. Thoſe who are curious to have a fuller explanation of this rule, may conſult Ward, Wallis, Taquet, Malcom, and other books on arithmetic.

Rum 10—8 ×4
Brandy 4—8 ×2

ALLIGATOR, in zoology, a name given to the ſmaller kind of crocodiles in the Weſt-Indies. See CROCODILE.

An alligator ſmells ſo ſtrong of muſk as to affect the water and air at a conſiderable diſtance.

ALLIOTH, a ſtar in the tail of the greater bear, much uſed for finding the latitude at ſea.

ALLIUM, GARLICK, in botany, the name of a genus of plants, the characters and uſes of which ſee under GARLICK.

ALLOCATION, *allocatio*, the admitting or allowing of an article in an account, particularly in the exchequer. Hence

ALLOCATIONE FACIENDA is a writ directed to the lord treaſurer, or barons of the exchequer, commanding them to allow an accountant ſuch ſums as he has lawfully expended in the execution of his office.

ALLOCATO COMITATU, a new writ of exigent allowed, before any other county-court held, on a former not being complied with. See the article EXIGENT.

ALLODIAL, an epithet given to an inheritance held without any acknowledgment to a lord or ſuperior, in oppoſition to feudal. See the article FEUDAL.

Allodial lands are free lands, for which neither fees, rents, nor ſervices are due. See the article ALLODIUM.

ALLODIARIUS, or ALODIARIUS, in our old writers, denotes the proprietor of an allodium. See the next article.

ALLODIUM, or ALLEUD, denotes lands which are the abſolute property of their owner, without being obliged to pay any ſervice or acknowledgment whatever to a ſuperior lord; in which ſenſe they ſtand oppoſed to feudal lands, which pay a fee to ſome ſuperior.

Allodium nobile, that which had alſo civil and criminal juriſdiction annexed to it; in oppoſition to *allodium villanum*, which had no ſuch juriſdiction.

ALLOM, the ſame with alum. See the article ALUM.

ALLONGE, in fencing, denotes a thruſt or paſs at the adverſary. See PASS.

ALLOPHYLUS, in botany, a genus of the octandria monogynia claſs of plants, the calyx of which is a perianthium compoſed of four leaves of an orbicular figure, and two oppoſite ones ſmaller than the others; the corolla conſiſts of four petals leſs than the cup, of an orbicular figure, and equal one to another, with large ungues of the ſame length with the ſmaller leaves of the cup. The characters of the fruit and ſeed are not aſcertained.

ALLOTTING, or ALLOTMENT *of goods*, in commerce, is the dividing a ſhip's cargo into ſeveral parts, which are to be purchaſed by ſeveral perſons, whoſe names being written upon as many ſlips of paper, are applied by an indifferent perſon to the ſeveral lots; by which means the goods are divided without partiality, each man having the parcel upon which his name is fixed.

ALLOWANCES, at the cuſtom-houſe, to goods rated by weight, are two, *viz.* draught and tare. See the articles DRAUGHT and TARE.

ALLOWED, a word written in the margin of an account of expences over againſt ſuch articles as are admitted to be reaſonable.

ALLOY, or ALLAY, a proportion of a baſer metal mixed with a finer one. Thus all gold coin has an alloy of ſilver and copper, as ſilver coin has of copper alone; the proportion in the former caſe, for ſtandard gold, being two carrats of alloy in a pound troy of gold; and in the latter eighteen penny-weight of alloy for a pound troy of ſilver.

According as gold or ſilver has more or leſs alloy than that mentioned above, it is ſaid to be coarſer or finer than the ſtandard. However, it ought to be remarked, that the coin of different nations varies greatly in this reſpect; ſome uſing a larger, and others a leſs proportion of alloy, the original intention of which was to give the coin a due degree of hardneſs. There is a method of examining, by means of touch-needles, what proportion of alloy is contained in any coin. See the article TOUCH-NEEDLE.

ALLOM, the ſame with alum. See ALUM.

ALLUSION, in rhetoric, a figure by which ſomething is applied to, or underſtood of another, on account of ſome ſimilitude between them.

An alluſion to words is trifling and low, making what we commonly call a pun. See the article PUN.

However, alluſions to ſome apophthegm, remarkable event, or generally received cuſtom, are not only extremely pleaſing, but approved by the beſt writers, antient as well as modern.

ALLUVION, *alluvio*, among civilians, denotes the gradual increaſe of land along the ſea-ſhore, or on the banks of rivers. This, when ſlow and imperceptible, is deemed a lawful means of acquiſition; but when a conſiderable portion of land is torn away at once, by the violence of the current, and joined to a neighbouring eſtate, it may be claimed again by the former owner.

ALLY, *ſocius*, in matters of polity, a ſovereign prince or ſtate, that has entered into alliance with others. See the article ALLIANCE.

ALMACANTARS, the ſame with almucantars. See ALMUCANTARS.

ALMACARRON, a port-town of Spain, in the province of Murcia, at the mouth of the river Guadalentin: weſt longitude 1° 15′, north latitude 37° 40′.

ALMADE, a town of Spain, in the province of la Mancha, in the kingdom of Caſtile, ſituated upon the top of a mountain, where are the moſt antient, as well as the richeſt ſilver mines in Europe.

ALMADIE, a kind of canoe, or ſmall veſſel, about four fathom long, uſually made of bark, and uſed by the negroes of Africa.

Almadie is alſo the name of a kind of long boats, fitted out at Calicut, which are eighty feet in length, and ſix or ſeven in breadth. They are exceeding ſwift, and are otherwiſe called *catburi*.

ALMAGEST, in matters of literature, is particularly uſed for a collection or book compoſed by Ptolemy, containing various problems of the antients both in geometry and aſtronomy.

Almageſt is alſo the title of other collections of this kind. Thus, Riccioli has publiſhed a body of aſtronomy, which he calls the *New almageſt*; and Plukenet, a book which he calls *Almageſtum botanicum*.

ALMAGRA, in natural hiſtory, the name of a fine deep-red ochre, with a faint admixture of purple, uſed both in painting and medicine, being an excellent aſtringent. It is the ſame with what the antients called *ſil atticum*.

ALMANAC, in matters of literature, a table containing the calendar of days and months, the riſing and ſetting of the ſun, the age of the moon, &c.

Authors are neither agreed about the inventor of almanacs, nor the etymology of the word; ſome deriving it from the arabic particle *al*, and *manah*, to count; whilſt others think it comes from *almanah*, *i. e.* handſels, or new year's gifts, becauſe the aſtrologers of Arabia uſed, at the beginning of the year, to make preſents of their ephemerides for the year enſuing.

As to the antiquity of almanacs, Ducange informs us, that the egyptian aſtrologers, long before the Arabians, uſed the term *almenach*, and *almenachica deſcriptio*, for their monthly predictions. Be this as it will, Regiomontanus is allowed to have been the firſt who reduced almanacs to their preſent form.

Conſtruction of ALMANACS. The firſt thing to be done, is to compute the ſun's and moon's place for each day in the year, or it may be taken from ſome ephemerides and entered in the almanac; next, find the dominical letter, and, by means thereof, diſtribute the calendar into weeks: then, having computed the time of eaſter, by it fix the other moveable feaſts; adding the immoveable ones, with the names of the martyrs, the riſing and ſetting of each luminary, the length of day and night, the aſpects of the planets, the phaſes of the moon, and the ſun's entrance into the cardinal points of the ecliptic, *i. e.* the two æquinoxes and ſolſtices.

Theſe are the principal contents of almanacs; beſides which there are others of a political nature, and conſequently different in different countries, as the birth-

days

days and coronation of princes, tables of interest, &c.

On the whole, there appears to be no myſtery, or even difficulty, in almanac-making, provided tables of the heavenly motions be not wanting. For the duties upon almanacs, ſee STAMP-DUTIES.

ALMANZA, a little town in the province of New Caſtile in Spain, remarkable for the defeat of the confederate army by the French, is 1707: weſt longitude 1° 15′, north latitude 39°.

ALMEDA, a town in the province of Eſtremadura, in Portugal: weſt longitude 9° 40′, north latitude 38° 40′.

ALMEDIA, a frontier town in the province of Tralos Montes, in Portugal: weſt longit. 7°, north latitude 40° 40′.

ALMEHRAB, in the mahometan cuſtoms, a nich in their moſques, pointing towards the kebla, or temple of Mecca, to which they are obliged to bow in praying. See the article KEBLA.

ALMIGGIM-WOOD, in the ſcripture-language, is thought to be that of the indian pine-tree; which being exceeding light, and of a beautiful white colour, was greatly eſteemed for making muſical inſtruments.

ALMOND, the fruit of the almond-tree. See the next article.

ALMOND-TREE, *amygdalus*, in botany, the engliſh name of a diſtinct genus of trees, with roſaceous flowers, and an oblong ſtony fruit, in which is included a kernel of the ſame ſhape. See plate XVI. fig. 4. This genus belongs to the *icoſandria-monogynia* claſs of Linnæus, who makes it comprehend both the *amygdalus* and *perſica*, or peach-tree, of other botaniſts.

Of the ſeveral ſpecies of almonds, the ſweet and bitter kinds are moſt uſed in medicine; the former being reputed cooling, healing, emollient, and nutritive; and the latter, aperient, deterſive, and diuretic.

We have ſeveral preparations of almonds, as blanched almonds, or thoſe which have been ſteeped in warm water, till they dropped out of their ſhells; butter of almonds, made by adding blanched almonds to a preparation of cream and the whites of eggs boiled together; almond-milk, made of ſweet blanched almonds boiled in fair water, and frequently uſed as a cooler; and ſo in other inſtances.

ALMONDS, *amygdalæ*, in anatomy, a name ſometimes given to the two glands, more uſually called tonſils. See TONSILS.

ALMOND-FURNACE, among refiners, that in which the ſlags of litharge, left in refining ſilver, are reduced to lead again, by the help of charcoal.

ALMONER, an officer appointed to diſtribute alms to the poor.

The lord almoner, or lord high almoner of England, is an eccleſiaſtical officer, uſually a biſhop, who has the forfeiture of all deodands, and the goods of felos de ſe, which he is to diſtribute among the poor.

By virtue of an antient cuſtom, the lord almoner may give the firſt diſh from the king's table, to whatever poor perſon he pleaſes; or, in lieu of it, an alms in money.

The pariſhioners, alſo, of the pariſh adjacent to the king's place of reſidence, nominate twenty-four poor men, to whom the lord almoner diſtributes four pence a day in money, bread, and ſmall beer.

To the great almoner of France belongs the ſuperintendency of hoſpitals, &c. and from his hands the king receives the ſacrament.

ALMONER is ſometimes alſo uſed for a deacon of a church, a chaplain, or even a legatee.

ALMONRY, AUMBRY, or AMBRY. See the article AMBRY.

ALMS, *eleemoſynæ*, a general term for what is given out of charity to the poor.

In the early ages of chriſtianity, the alms of the charitable were divided into four parts, one of which was allotted to the biſhop, another to the prieſts, and a third to the deacons and ſub-deacons, which made their whole ſubſiſtence; the fourth part was employed in relieving the poor, and in repairing the churches.

The manner of collecting alms in the aſſemblies of the primitive chriſtians, is explained by St. Paul, in the ninth chapter of his ſecond epiſtle to the Corinthians.

Alms alſo denotes lands or other effects left to churches, or religious houſes, on condition of praying for the ſoul of the donor. Hence, free-alms, was that which is liable to no rent or ſervice. Reaſonable alms was a certain portion of the eſtates of inteſtate perſons, allotted to the poor.

ALMS-BOX, or ALMS-CHEST, in churches, and hoſpitals, &c. a ſtrong box, with a hole or ſlit in the upper part, to receive the alms of the charitably diſpoſed. Thoſe of churches have three keys, one kept by the parſon, and the other two by the church-wardens.

ALMS-FEOH, or ALMES-FEOH, a term antiently uſed for Peter's pence. See the article PETER'S PENCE.

ALMS-HOUSE, a kind of petty hoſpital for the maintenance of a certain number of poor, aged, or diſabled perſons. Of theſe there are a great number about London and Weſtminſter; ſome endowed by public companies, and others by private perſons.

ALMUCANTARS, in aſtronomy, an arabic word denoting circles of the ſphere paſſing through the center of the ſun, or a ſtar, parallel to the horizon, being the ſame as parallels of altitude. See the article PARALLELS *of altitude*.

Almucantars are the ſame with reſpect to the azimuths and horizon, that the parallels of latitude are with regard to the meridians and equator. They ſerve to ſhew the height of the ſun and ſtars, and are deſcribed on many quadrants, *&c.*

ALMUCANTAR's *ſtaff*, a mathematical inſtrument, uſually made of box, or pear-tree, having an arch containing fifteen degrees.—It was formerly uſed to find the altitude of the ſun about the time of his riſing, in order to find his amplitude, and the variation of the compaſs.

ALMUCIUM, in middle-age writers, denotes a kind of cover for the head, worn chiefly by monks and eccleſiaſtics: it was of a ſquare form, and ſeems to have given riſe to the bonnets of the ſame ſhape, ſtill retained in univerſities and cathedrals.

ALMUG-TREE, mentioned in the ſcriptures, which the vulgate tranſlates *ligna thyina*, and the ſeptuagint *wrought-wood*, is underſtood by the beſt commentators to be a gummy oily ſort of a tree, and particularly that which produces gum arabic.

ALMUNECAR, a port-town of Granada, in Spain, ſituated upon the Mediterranean ſea: weſt longitude 3° 45′, north lat. 36° 40′.

ALNAGE, or AULNAGE, in the engliſh polity, the meaſuring of woollen manufactures, with an ell, and the other functions of the alnager. See the next article.

Alnage was at firſt intended as a proof of the goodneſs of the commodity, and therefore a ſeal was invented as a ſignal, that the commodity was made according to the ſtatute. But now, that theſe ſeals may be bought and affixed to whatever commodity the buyer pleaſes, our rivals have acquired an opportunity of ſupplanting our trade with foreign nations, to the great prejudice of our woollen manufactures.

ALNAGER, in the engliſh polity, a public ſworn officer, whoſe buſineſs is to examine into the aſſize of all woollen cloth made throughout the kingdom, and to fix ſeals upon them. Another branch of his office is to collect an alnage-duty to the king. See the laſt article.

There are now three officers relating to the alnage, namely, a ſearcher, meaſurer, and alnager; all which were formerly comprized in the alnager, until by his own neglect it was thought proper to ſeparate theſe offices.

ALNUS, the ALDER-TREE, in botany, a ſpecies of betula, with amentaceous flowers, and fruit of a ſquamoſe ſtructure, containing numerous compreſſed ſeeds. See plate XIII. fig. 3. and the article BETULA.

ALOA, ἄλοα, in grecian antiquity, a feſtival kept in honour of Ceres, by the huſbandmen, and ſuppoſed to reſemble our harveſt-home.

ALOE, in botany, a genus of the hexandria monogynia claſs of plants, with a liliaceous flower, conſiſting of only one tubular leaf, divided into ſix deep ſegments at the edge: its fruit is an oblong capſule, divided into three cells, and containing a number of angulated ſeeds. See plate XIII. fig. 4.

Several ſpecies of this exotic plant are cultivated in the gardens of the curious, where they afford a very pleaſing variety, as well by the odd ſhape of their leaves as by the different ſpots with which they are variegated.

Some aloes are arboreſcent, or divided into a number of branches, like trees; others are very ſmall, growing cloſe to the ground. The two moſt conſiderable ſpecies are the aloe of America, and that of Aſia; the former on account of its beautiful flowers, and the latter for the drug prepared from it.

ALOE, or ALOES, in pharmacy, the inſpiſſated juice of the aſiatic aloe, prepared in the following manner: from the leaves, freſh pulled, is preſſed a juice, the thinner and purer part of which is poured off, and ſet in the ſun to evaporate to a hard yellowiſh ſubſtance, which is called ſuccotrine aloe, as being chiefly made at Succotra. The thicker part, being put into another veſſel, hardens into a ſubſtance of a liver-colour, and thence called *aloe hepatica*. The thickeſt part, or ſediment,

Fig. 1. ALKA, the *AWK* or *RAZOR-BILL*.



Fig. 2. *ALKEKENGI*.



Fig. 3. ALNUS, the *ALDER-TREE*.

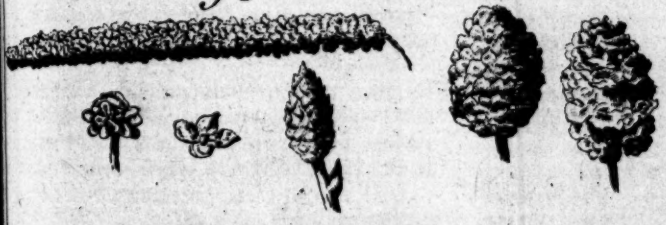


Fig. 4. the ALOE.



T. Jefferys sculp.

BRITISH MUSEUM

ment hardens into a coarſe ſubſtance, called *aloe cabalina*, or the horſe-aloe, as being chiefly uſed as a purge for horſes.

This juice is famous for its purgative virtues, being uſually given in the form of a tincture in wine, which is called *hiera picra*: it purges off a large quantity of bilious ad pituitous humours, and promotes the menſes and hæmorrhoidal diſcharges; but then it ſhould always be adminiſtred with caution, and never given to people ſubject to ſpitting of blood, or hæmorrhages of any kind. It is alſo to be avoided in all acute and inflammatory diſorders, as well as by women with child, for fear of abortion.

ALOE *roſata*, a preparation of ſuccotrine aloes, which being diſſolved in the juice of roſes, or violets, and expoſed to the ſun, or put upon a ſlow fire, thickens to a conſiſtency proper for making pills.

Aloes is accounted an excellent purging medicine, eſpecially to cold conſtitutions, a good ſtomachic; and, applied outwardly, is extremely ſerviceable in cicatrizing wounds.

ALOE-WOOD, *lignum aloes, or xylo-aloes*. See the article XYLO-ALOES.

ALOETICS, a general term for all medicines, the baſis or principal ingredient of which is aloes.

Aloetics are reputed hurtful in hæmorrhages, as alſo in the teneſmus, hemicranium, &c.

ALOGIANS, in church-hiſtory, a ſect of antient heretics, who denied that Jeſus Chriſt was the logos or eternal word; and conſequently rejected the goſpel of St. John, as ſpurious.

ALOOF, in the ſea-language, a word of command from the perſon who conns to the man at the helm, to keep the ſhip near the wind, when ſailing upon a quarter-wind.

ALOPECIA, in medicine, denotes a falling off of the hair, occaſioned either by a defect of nouriſhment, or by a bad ſtate of the humours.

Some make a diſtinction between the *alopecia* and *defluvium capillorum*, as in the former, certain ſpots are left entirely bald; whereas, in the latter, the hair only grows exceſſively thin. They likewiſe diſtinguiſh it from the *ophiaſis*, as the baldneſs in this laſt creeps in ſpiral lines about the head, like the windings of a ſerpent. The intention of cure, however, ſeems to be much the ſame in them all, *viz.* to ſupply proper nouriſhment, where that is wanting; and to correct the bad qualities of the humours, where theſe are in fault.

To prevent the hair from falling off by degrees, the head is to be waſhed every night at going to bed, with a lye, prepared by boiling the aſhes of vine branches in red wine. A powder made by reducing hermodactyls to fine flour, is alſo recommended for the ſame purpoſe.

In caſes where the baldneſs is total, a quantity of the fineſt burdock roots are to be bruiſed in a marble mortar, and then boiled in white wine till there remains only as much as will cover them. This liquor, carefully ſtrained off, is ſaid to cure baldneſs, by waſhing the head every night with ſome of it warm. A lye made by boiling aſhes of vine branches in common water, is alſo recommended with this intention. A freſh-cut onion rubbed on the part till it be red, and itch, is likewiſe ſaid to cure baldneſs.

ALOPECURUS, FOX-TAIL-GRASS, in botany, a genus of the triandria digynia claſs of plants, the calyx of which is a bivalve glume, containing a ſingle flower: the valves are hollow, of an ovato lanceolated figure, equal in ſize, and compreſſed; the corolla is univalve; the valve is concave, and of the length of the cup, and has a very long ariſta inſerted into its back near the baſe. There is no pericarpium: the corolla itſelf remains, and contains the ſeed, which is ſingle and of a roundiſh figure.

ALOSA, in ichthyology, a ſpecies of *clupea*, with the upper jaw bifid at the extremity, and ſpotted with black; called in engliſh the ſhad, or mother of herrings. See the article CLUPEA.

ALOST, a town in the auſtrian Flanders, upon the river Dender, half-way between Bruſſels and Ghent.

ALOWAY, a port-town of Scotland, ſituated on the river Forth, remarkable for the coal mines in its neighbourhood: weſt longitude 3° 45′, north latitude 56° 10′.

ALPHA, among grammarians, the name of the firſt letter of the greek alphabet, anſwering to our A.

The alpha, when compounded with other words, is moſt frequently uſed in a privative or negative ſenſe, anſwering to the engliſh particle *in* or *un*: thus *agamus*, ἄγαμος, ſignifies *unmarried*, being compounded of the privative α and γάμος marriage. Sometimes, however, it augments the ſignification of the words it is compounded with, as ἀκὼν, *valde robuſtus*.

As a numeral, alpha ſtands for one, or the

the firſt of any thing; only, for diſtinction ſake, there uſed to be an acute accent placed over it, when not a letter of order, thus Α'.

Hence it is that we find alpha frequently uſed among antient writers, for the firſt or principal perſon of a claſs or ſet of men: thus Plato is called the alpha of wits, as Eratoſthenes was ſurnamed beta, or the ſecond Plato. And, for the ſame reaſon, it is uſed for the beginning of a thing, as omega for the laſt; both which together, *viz.* Α and Ω, denote the eternity of God.

Alpha is alſo a title given by ſome antient writers to the jewiſh legiſlator Moſes. The reaſon of the appellation is much controverted. Helladius, in his Chreſtomathia, and Ptolemy ſon of Hepheſtion, pretend that Moſes was infected with the leproſy, which the greeks call λφος, and that hence aroſe the denomination λφα. This opinion ſeems to have owed its riſe to a tradition among the heathens, that the Jews were expelled Egypt, becauſe they were over-run with this diſeaſe. A tradition ſupported by Diodorus Siculus, Tacitus, Juſtin, Apion, and others; but refuted by Joſephus.—A late writer apprehends, that the notion of Moſes's leproſy took its riſe from that text in the old teſtament, wherein the prophet, having put his hand into his boſom, drew it out again white as a leper, which the Septuagint render Αλφος.

Others have invented other reaſons of the appellation, which do more honour to Moſes. Nicolai conjectures that he might have been denominated Alpha, on account of the fairneſs and brightneſs of his complexion, when he came from the mount; or from his being the chief, or leader of the jewiſh people; or even from his being well learned, in regard the Hebrew word *Aleph*, from whence the Greek alpha was formed, ſignified as much. If none of theſe will ſerve, the ſame author, from the conſideration of the radical letters of the word alpha, deduces divers other myſtical ſignifications: Moſes might have been ſo called, becauſe he was the moſt meek of men; or in regard he mediated between God and the Jews; or becauſe he was ſlow of ſpeech; or becauſe he converſed familiarly with God; or, in fine, becauſe he wrote a hiſtory of the times before him.

ALPHABET, in matters of literature, the natural or accuſtomed ſeries of the ſeveral letters of a language.

As alphabets were not contrived with deſign, or according to the juſt rules of analogy and reaſon, but have been ſucceſſively framed, and altered, as occaſion required, it is not ſurprizing that many grievous complaints have been heard of their deficiencies, and divers attempts made to eſtabliſh new and more adequate ones in their place.

All the alphabets extant are charged by biſhop Wilkins with great irregularities, with reſpect both to order, number, power, figure, &c.

As to the order, it appears (ſays he) inartificial, precarious, and confuſed, as the vowels and conſonants are not reduced into claſſes, with ſuch order of precedence and ſubſequence as their natures will bear. Of this imperfection the greek alphabet, which is one of the leaſt defective, is far from being free: for inſtance, the Greeks ſhould have ſeparated the conſonants from the vowels; after the vowels they ſhould have placed the diphthongs, and then the conſonants; whereas in fact, the order is ſo perverted that we find the ομικρον the fifteenth letter, in order of the alphabet, and the ωμεγα, or long o, the twenty-fourth and laſt, the ε the fifth, and the υ the ſeventh.

With reſpect to number, they are both redundant and deficient; redundant, by allotting the ſame ſound to ſeveral letters, as in the latin *c* and *k*, *f* and *ph*; or by reckoning double letters among the ſimple elements of ſpeech, as in the greek ξ and ψ, the latin *q* or *cu*, *x* or *ex*, and the *j* conſonant; deficient in many reſpects, particularly with regard to vowels, of which ſeven or eight kinds are commonly uſed, though the latin alphabet takes notice only of five. Add to this, that the difference among them, with regard to long and ſhort, is not ſufficiently provided againſt.

The powers again, are not more exempt from confuſion; the vowels, for inſtance, are generally acknowledged to have each of them ſeveral different ſounds; and among the conſonants we need only bring as evidence of their different pronunciation, the letter *c* in the word *circa*, and *g* in the word *negligence*. Hence it happens, that ſome words are differently written, though pronounced in the ſame manner, as *ceſſio* and *ſeſſio*; and others are different in pronunciation, which are the ſame in writing, as *give*, *dare*, and *give*, *vinculum*.

Finally, the figures are but ill-concerted, there

there being nothing in the characters of the vowels anſwerable to the different degrees of apertion; nor in the conſonants analogous to their agreements or diſagreements.

Alphabets of different nations vary in the number of their conſtituent letters. The engliſh alphabet contains twenty-four letters, to which if *j* and *v* conſonant are added, the ſum will be twenty-ſix; the french, twenty-three; the hebrew, chaldee, ſyriac, and ſamaritan, twenty-two each; the arabic, twenty-eight; the perſian, thirty-one; the turkiſh, thirty-three; the georgian, thirty-ſix; the coptic, thirty-two; the muſcovite, forty-three; the greek, twenty-four; the latin, twenty-two; the ſclavonic, twenty-ſeven; the dutch, twenty-ſix; the ſpaniſh, twenty-ſeven; the italian, twenty; the ethiopic, as well as tartarian, two hundred and two; the indians of Bengal, twenty-one; the baramos, nineteen; the chineſe, properly ſpeaking, have no alphabet, except we call their whole language their alphabet: their letters are words or rather hieroglyphics, and amount to about 80,000.

If alphabets had been conſtructed by able perſons, after a full examination of the ſubject, they would not have been filled with ſuch contradictions between the manner of writing and reading, as we have ſhewn above, nor with theſe imperfections that evidently appear in the alphabets of every nation. Mr. Lodowic, however, and biſhop Wilkins, have endeavoured to obviate all theſe, in their univerſal alphabets or characters. See the article CHARACTER.

ALPHABET is alſo uſed for a cypher, or table of the uſual letters of the alphabet, with the correſponding ſecret characters, and other blank ſymbols intended to render the writing more difficult to be decyphered. See the article DECYPHERING.

ALPHABET, among merchants, a kind of index, with the twenty-four letters, in their natural order, in which are ſet down the names of thoſe who have open accounts, referring to the folios of the ledger.

ALPHABETICAL, ſomething belonging to, or partaking of, the nature of an alphabet. Thus we ſay, alphabetical order, method, &c.

ALPHETA, in aſtronomy, the ſame with lucida coronæ. See the article LUCIDA.

ALPHONSIN, in ſurgery, an inſtrument for extracting bullets out of gun-ſhot wounds.

This inſtrument derives its name from the inventor Alphonſus Ferrier, a phyſician of Naples. It conſiſts of three branches, which are cloſed by a ring. When cloſed and introduced into the wound, the operator draws back the ring towards the handle, upon which the branches opening take hold of the ball; and then the ring is puſhed from the haft, by which means the branches graſp the ball ſo firmly as to extract it from the wound. See the article GUN-SHOT WOUNDS.

ALPHONSINE TABLES, aſtronomical tables calculated by order of Alphonſus, king of Caſtile, in the conſtruction of which that prince is ſuppoſed to have contributed his own labour. See TABLE.

ALPHOS, ἀλφὸς, among phyſicians, a diſeaſe of the ſkin, otherwiſe called *leuce & vitiligo*; wherein it is rough, and ſprinkled as it were with white ſpots: for when theſe are black, the diſtemper is called melane.

ALPINIA, in botany, a genus of the monandria-monogynia claſs of plants, the corolla whereof is monopetalous, unequal, and as it were double; the exterior one is trifid, the upper ſegment is hollow, the two ſide ones flat, and it has a tube; the interior is ſhort, its edge is trifid, and the lower ſegment of the three hangs out beyond the lateral parts of the exterior corolla, the other two are emarginated, and the baſe is ventricoſe; the fruit is a fleſhy capſule, of an ovated figure, compoſed of three valves, and containing three cells; the ſeeds are numerous, of an ovated figure, with a prominent but truncated apex, and a caudated baſe.

ALPS, a chain of exceeding high mountains, ſeparating Italy from France and Germany.

Alps is ſometimes alſo uſed in a more general ſenſe, for any mountains of extraordinary height.

ALRAMECH, in aſtronomy, the name of a ſtar of the firſt magnitude, otherwiſe called arcturus. See ARCTURUS.

ALSACE, a province formerly belonging to Germany, but almoſt intirely ceded to France by the peace of Munſter, is ſituated between the river Rhine on the eaſt, and Lorrain on the weſt, Switzerland on the ſouth, and the palatinate of the Rhine on the north.

ALSEN, an iſland in the leſſer Belt, at the entrance

entrance of the Baltic ſea, between Sleſwic and Funen, E. longitude 10°. N. latitude 52° 12′.

ALSFIELD, or ASFIELD, a town of Heſſe Caſſel, in Germany, E. longitude 9°. N. latitude 50° 40′.

ALSINE, CHICKWEED, in botany, the name by which Tournefort calls the ſtellaria of Linnæus, the flower of which is roſaceous; conſiſting of ſeveral petals diſpoſed in a circular form, and ſometimes whole, ſometimes bifid at the ends. The fruit is a membranaceous capſule, of a roundiſh or conic ſhape, and containing a number of ſeeds affixed to a placenta. See plate XIV. fig. 1. and STELLARIA. The alſines are reputed cooling, and therefore good in ſervours of the blood, and conſumptions ariſing from hectical diſorders.

ALSINE, in the Linnæan ſyſtem of botany, a genus of the pentandria trigynia claſs of plants, the calyx of which is a perianthium, conſiſting of five concave oblong and acuminated leaves; the corolla conſiſts of five equal petals, longer than the cup; the fruit is an oval covered capſule, containing only one cell: the ſeeds are numerous and roundiſh.

ALSINELLA, in botany, the name by which Dillenius calls the plant ſagina. See the article SAGINA.

ALSIRAT, in the mahometan theology, denotes a bridge laid over the middle of hell, the paſſage or path whereof is ſharper than the edge of a ſword; over which, however, every body muſt paſs at the day of judgment, when the wicked will tumble headlong into hell, whereas the good will fly over it like the wind.

ALT, in muſic, a term applied to the high notes in the ſcale. See SCALE.

ALTAR, *altare*, or *ara*, a place upon which ſacrifices were antiently offered to ſome deity,

The heathens at firſt made their altars only of turf; in following times they were made of ſtone, of marble, of wood, and even of horn, as that of Apollo in Delos. Altars differed in figure as well as in materials. Some were round, others ſquare, and others oval. All of them were turned towards the eaſt, and ſtood lower than the ſtatues of the gods, and were generally adorned with ſculpture, inſcriptions, and the leaves and flowers of the particular tree conſecrated to the deity. Thus, the altars of Jupiter were decked with oak, thoſe of Apollo with laurel, thoſe of Venus with myrtle, and thoſe of Minerva with olive.

The height of altars alſo differed according to the different gods to whom they ſacrificed. Thoſe of the cœleſtial gods were raiſed to a great heighth above the ground; thoſe appointed for the terreſtrial were almoſt on a level with the ſurface of the earth; and, on the contrary, they dug a hole for the altars of the infernal gods. According to Servius, the firſt were called *altaria*, the ſecond *aræ*, and the laſt *crobiculi*; but this diſtinction is not every where obſerved, for we find in the beſt authors, the word *ara*, as a general word, including the altars of cœleſtial, infernal, and terreſtrial gods.

Before temples were in uſe, altars were erected ſometimes in groves, ſometimes in the highways, and ſometimes on the tops of mountains; and it was a cuſtom to engrave upon them the name, proper enſign, or character of the deity to whom they were conſecrated. Thus, St. Paul obſerved an altar at Athens, with an inſcription *To the unknown God.*

In the great temples of antient Rome, there were ordinarily three altars; the firſt was placed in the ſanctuary, at the foot of the ſtatue of the divinity, upon which incenſe was burnt, and libations offered: the ſecond was before the gate of the temple, and upon it they ſacrificed the victims: and the third was a portable altar, upon which were placed the offerings and the ſacred veſſels.

Beſides theſe uſes of the altars, the antients ſwore upon them, and ſwore by them in making alliances, confirming treaties of peace, and on other ſolemn occaſions. Altars alſo ſerved as a place of refuge and ſanctuary to all thoſe who fled to them, whatever crime they had committed.

Among the Jews, altars in the patriarchal times were very rude. The altar which Jacob ſet up at Bethel was nothing but a ſtone, which ſerved him inſtead of a bolſter; that of Gideon, a ſtone before his houſe; and the firſt which God commanded Moſes to erect to him, was probably of earth or unpoliſhed ſtones without any iron; for if any uſe was made of that metal, the altar was declared impure.

The principal altars of the Jews were thoſe of *incenſe*, of *burnt-offering*, and the *altar*, or *table*, *for the ſhew-bread*.

The altar of incenſe was a ſmall table of ſhittim wood, covered with plates of gold, of

BRITISH MUSEUM

Fig. 1. ALSINE.



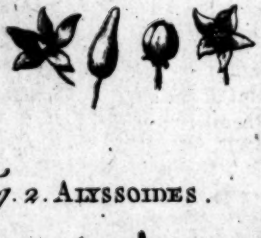


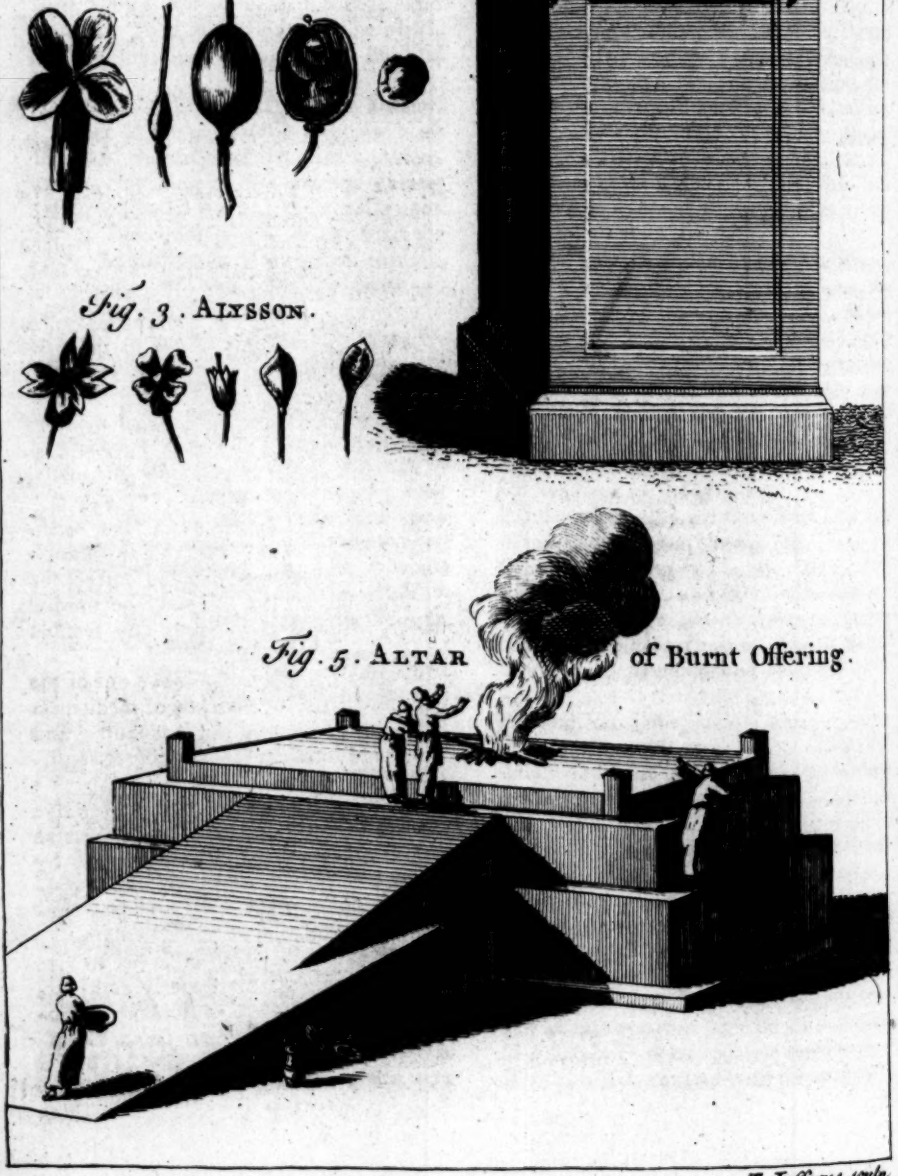
Fig. 2. ALYSSOIDES.

Fig. 3. ALYSSON.

Fig. 4. ALTAR of Incenſe.



Fig. 5. ALTAR of Burnt Offering.



T. Jefferys ſculp.

of one cubit in length, another in width, and two in heighth. At the four corners were four kinds of horns, and all round a little border or crown over it. This was the altar hidden by Jeremiah before the captivity, and upon it the officiating prieſt offered, every morning and evening, incenſe of a particular compoſition. See plate XIV. fig. 4.

The altar of burnt-offerings was made of ſhittim wood, and carried upon the ſhoulders of the prieſts by ſtaves of the ſame wood, overlaid with braſs. In the time of Moſes, this altar was five cubits ſquare and three high, but in Solomon's temple it was much larger, being twenty cubits ſquare and ten in height. It was covered with braſs, and at each corner was a horn or ſpire wrought out of the ſame wood with the altar, to which the ſacrifices were tied. Within the hollow was a grate of braſs, on which the fire was made; through it fell the aſhes, and were received in a pan below. At the four corners of the grate were four rings and four chains, which kept it up at the horns. This altar was placed in the open air, that the ſmoke of the burnt-offerings might not ſully the inſide of the tabernacle. See plate XIV. fig. 5.

The altar or table for the ſhew-bread, was likewiſe of ſhittim wood, covered with plates of gold, having a little border round it, adorned with ſculpture. It was two cubits long, one wide, and one and an half in height. Upon this table, which ſtood in the holy of holies, were put every ſabbath-day, twelve loaves, with ſalt and incenſe. See the article SHEW-BREAD.

The jewiſh altars, after the return from the captivity, and the building of the ſecond temple, were in ſome reſpects different from thoſe deſcribed above.

That of burnt-offerings, was a large pile, built of unhewn ſtones, thirty-two cubits ſquare at the bottom, and twenty-four ſquare at the top. The aſcent was by a gentle riſing thirty-two cubits in length, and ſixteen in breadth.

ALTAR is alſo uſed, among chriſtians, for the communion-table. See the article COMMUNION-TABLE.

The denomination altar, is undoubtedly founded on the notion of the euchariſt's being a proper ſacrifice. See the article EUCHARIST.

In the greek church there is a preparatory kind of altar, called *altar of prothefis*; whereon the bread is bleſſed, before it is carried to the large altar.

ALTAR is ſometimes alſo uſed to denote the offerings made at the altar, in contradiſtinction from the ſettled revenues of a church, called ſimply *eccleſia*.

ALTAR, *ara*, in aſtronomy. See ARA.

ALTAR-THANE, in our old law-books, an appellation given to the prieſt, or parſon of a pariſh, to whom the altarage belonged. See the article ALTARAGE.

ALTARAGE, among eccleſiaſtical writers, denotes the profits ariſing to a prieſt on account of the altar, as well as the offerings themſelves made upon it.

ALTARIST, *altariſta*, the ſame with altar-thane. See ALTAR-THANE.

ALTEA, a ſea-port town of Spain, ſituated upon the Mediterranean-ſea, in the province of Valencia, about forty-five miles ſouth of the city Valencia. W. lon. 15′. N. lat. 38°. 40′.

ALTEMBURG, a town of Tranſilvania, ſubject to the houſe of Auſtria, ſituated in 23° eaſt longit. and 46°. 25′. north lat.

ALTENA, a port-town of Holſtein, in Germany, ſituated on the river Elbe. It belongs to the Danes, and is the place where all their eaſt-india goods are ſold.

ALTENBURG, a town of Miſnia, in upper Saxony, about twenty-five miles ſouth of Leipſic, and ſubject to the duke of Saxe-altenburg. E. longit. 12°. 40′. N. lat. 50°. 50′.

ALTENBURG-OWAR, a fortified town of lower Hungary, ſituated on the river Danube, and ſubject to the houſe of Auſtria. E. lon. 17°. 20′. N. lat. 48°. 15′.

ALTERANTS, or ALTERATIVE *medicines*, in pharmacy, *&c.* an appellation given to all ſuch medicines as correct the bad qualities of the blood and other animal fluids, without occaſioning any ſenſible evacuation.

Alterants, in this ſenſe, make one of the capital ſpecies, or diviſions of medicines. They ſtand oppoſed to evacuants; and are alſo contradiſtinguiſhed from ſtrengtheners, *&c.*

We meet with medicines of the purgative kind, repreſented by practical writers as alterants; the colocynth particularly by Helmont: for all medicines which operate in the fartheſt paſſages, they frequently include under that appellation. Accordingly it is found of ſervice to give ſuch medicines as are properly cathartic, by way of alteratives, in ſtubborn, chronical caſes; thus, *tinctura ſacra*, for inſtance, given in the quantity of half a ſpoonful for a doſe, has no immediate

effect upon the inteſtines, ſo as to diſcharge their contents, but paſſes into the further ſtages of circulation.

Dr. Woodward enquires into the efficacy of ſeveral of the moſt celebrated alterants, and endeavours to ſhew on what little foundation their great uſe is eſtabliſhed. Of this number, according to him, are the abſorbents, cortex peruvianus, bitters, ſalts, ſteel and its preparations, mineral waters, &c.

The more efficacious and uſeful alterants, according to the ſame writer, are cordials, ſtomachics, attenuants, mercurius dulcis, vegetable oils, mucilages, certain abſorbents, and ſome preparations of opium.

According to this learned phyſician, all that is commonly alledged concerning the change of the principles, or ferments of diſeaſes, by alterant remedies, is merely chimerical and imaginary; that there is no change made to the advantage of the human body, without a ſucceſſive renovation, and diſcharge of what is hurtful, and a ſupply of its place by ſomething innocent.

The primitive or conſtituent elements of bodies never change their figure, magnitude, ſolidity, or gravity, but remain ſtill the ſame as at the creation. Hence ſome infer, 1. The vanity of all pretences to the tranſmutation of metals. And, 2. The folly of pretending to change the maſs of blood, by thoſe remedies called alterants.

The mixtures and combinations of the primitive elements are almoſt infinite, and their alterations as to ſenſe and external appearance is ſo too. It may be added, that among alterant medicines, there are ſeveral which change the ſcene of the ſymptoms; others ſuſpend the action of the morbific matter for a time; and others diminiſh the ſenſibility of the organs. But theſe remedies, which hold the morbific principles captive for a time, are only palliatives, and even on ſome accounts, dangerous, ſince they may as well captivate other principles neceſſary to life. Woodward gives the preference to evacuants, as being the only medicines capable of freeing the machine from what incommodes it.

Some take a contrary courſe, and aſcribe even the ſalutary effects of evacuants to their alterative nature. This has been alledged of mercury in the venereal diſeaſe; the like is urged concerning minoratives, which ſome maintain do not work a cure by evacuation, ſo much as by alteration. The like is alledged of ipecacuanha in the cure of the dyſenteries, and of divers other emetics, in caſes of apoplexies. In effect, evacuating medicines, as they do not ſeparate the good from the bad, ſeem indifferently diſpoſed, either to do harm or good.

Alterants operate chiefly by ſweetening what is too ſour and acid, cooling what is over hot, and the like. Hence the diviſion of them into abſorbents, calmers, attenuants, emollients, and demulcents. See the articles ABSORBENTS, &c.

ALTERATE or ALTERAL, in muſic and geometry. See the article SESQUI.

ALTERATION, *alteratio*, in a general ſenſe, denotes ſome variation in the qualities or circumſtances of a thing, without wholly changing its nature. Thus, a piece of cloth is altered by being dyed a different colour; ſo is a piece of wood, by being faſhioned into a different ſhape; and ſo in other caſes.

ALTERATION, in medicine, is particularly uſed to denote the action of alterant medicines. See the article ALTERANTS. Alteration, in a ſtill more limited ſenſe, is uſed for the change which food undergoes before it becomes proper nouriſhment to the body; in which ſenſe it comprehends digeſtion and aſſimilation. See DIGESTION and ASSIMILATION.

ALTERATIVE MEDICINES, the ſame with alterants. See ALTERANTS.

ALTERCATION, a debate between two companions. Thus, we ſay, they have continually ſome altercation, though they never come to an open rupture.

ALTERN-BASE, in trigonometry, a term uſed in contradiſtinction to the true baſe. Thus, in oblique triangles, the true baſe is either the ſum of the ſides, and then the difference of the ſides is called the altern baſe; or the true baſe is the difference of the ſides, and then the ſum of the ſides is called the altern baſe.

ALTERNATE, in a general ſenſe, a term applied to ſuch perſons or things as ſucceed each other by turns. Thus, two who command each his day, are ſaid to have an alternate command, or to command alternately.

ALTERNATE, in heraldry, is ſaid in reſpect of the ſituation of the quarters. Thus the firſt and fourth quarters, and the ſecond and third, are uſually of the ſame nature, and are called alternate quarters.

ALTERNATE, in botany, ſuch a diſpoſi-

tion

tion of the leaves of a plant, that the firſt on one ſide of a branch ſtands higher than the firſt on the other ſide, the ſecond the ſame, and ſo on to the top.

ALTERNATE ALLIGATION in arithmetic. See the article ALLIGATION.

ALTERNATE ANGLES, in geometry. See the article ANGLE.

ALTERNATE PROPORTION. See the article PROPORTION.

ALTERNATION properly ſignifies a ſucceſſion by turns. See ALTERNATE.

ALTERNATION is alſo uſed for the different ways which any number of quantities may be changed, or combined. See the article COMBINATION.

ALTERNATIVE, in a general ſenſe, denotes much the ſame with alternate. See the article ALTERNATE.

ALTERNATIVE PROMISE, that whereby two or more perſons are bound, conjunctly and ſeverally, to perform ſomething; which being done by any one of them, all the reſt are acquitted.

ALTERNATIVE PROPOSITIONS, the ſame with thoſe more uſually called disjunctive ones. See the article DISJUNCTIVE PROPOSITION.

ALTHÆA, MARSH-MALLOW, in botany, a genus of plants, with a double calyx, the exterior one being divided into nine ſegments; the fruit conſiſts of numerous capſules, each containing a ſingle ſeed. It belongs to the monadelphia polyandria claſs of Linnæus.

Its flowers and fruit are nearly the ſame with thoſe of the *malva*, or mallow. See the article MALVA.

Althæa is much uſed as an emollient. The root and leaves are of great uſe againſt ſharp corroding humours in the ſtomach; alſo balſamic and pectoral, and are often ordered in clyſters for the ſtone, and in cataplaſms and fomentations againſt ſwellings.

ALTIMETRY, *altimetria*, denotes the art of meaſuring altitudes or heights. See the articles ALTITUDE and HEIGHT.

ALTIN, a kingdom of Aſia, in great Tartary, between the ſources of the Irtich and the Oby. It is bounded on the north by the Kirgiſes, on the eaſt by the Amaduners, on the ſouth by the kingdom of Eluth, and on the weſt by the Irtich, which ſeparates it from Barabinſkoi.

ALTIN is alſo the capital of the kingdom of that name, ſituated in the northern part of the kingdom, at the head of the river Kilam.

ALTIN, in commerce, a kind of money current in Muſcovy, worth three copics.

ALTINCAR, among metallurgiſts, a kind of flux-powder, uſed in the fuſion and purification of metals.

ALTITUDE, *altitudo*, in geometry, one of the three dimenſions of body; being the ſame with what is otherwiſe called height. See the article HEIGHT.

Altitude of a figure, is the diſtance of its vertex from its baſe, or the length of a perpendicular let fall from the vertex to the baſe. See the articles FIGURE, PERPENDICULAR, &c.

ALTITUDE, in optics, is the height of an object above a line, drawn parallel to the horizon from the eye of the obſerver.

ALTITUDE *of the eye*, in perſpective, is its perpendicular height above the geometrical plane.

ALTITUDE *of a ſtar*, &c. in aſtronomy, is an arch of a vertical circle, intercepted between the ſtars and the horizon.

This altitude is either true or apparent, according as it is reckoned from the rational or ſenſible horizon, and the difference between theſe is what is called by aſtronomers the parallax of altitude. See the article PARALLAX.

Near the horizon, this altitude is always increaſed by means of refraction. See the article REFRACTION.

Sailors commonly take the altitudes of ſtars with a quadrant, but as this method is liable to an error of ſix, ſeven, or more minutes, by reaſon of the motion of the ſhip, as well as the coarſeneſs of their inſtruments, Mr. Parent has given a new way of finding their altitudes, by means of a common watch. His method is this: having obſerved the difference of time between the riſing of two ſtars, the right aſcenſion and declination of which are known from aſtronomical tables, it will be eaſy to diſtinguiſh that part of the difference which ariſes from their different poſition from that ariſing from the obliquity of the ſphere. Now this laſt is preciſely the altitude of the pole of the place of obſervation; for as to the way the ſhip may have made between the riſing of the two ſtars, it is ſo ſmall as to be ſafely overlooked, or at moſt eſtimated in the common way of reckoning.

As to the methods of taking the meridian altitude of the ſun, or of a ſtar, by means of a gnomon, or quadrant. See the articles GNOMON, and QUADRANT.

ALTITUDE

ALTITUDE *of motion*, according to Dr. Wallis, is its meaſure eſtimated in the line of direction of the moving force.

ALTITUDE, in aſtrology, is the ſame with what is otherwiſe called exaltation. See the article EXALTATION.

ALTITUDE *of fluids* is more uſually expreſſed by the term depth. See DEPTH.

Determinative ALTITUDE, that from whence a heavy body falling, acquires a certain velocity by its natural acceleration.

ALTITUDE *of the equator*. See EQUATOR.

ALTITUDE *of the nonageſimal*. See the article NONAGESIMAL.

Circles of ALTITUDES, See CIRCLE.

Parallels of ALTITUDE. See PARALLEL.

ALTKIRK, a town of Alſace in Germany, ſituated on the river Ill, in N. lat. 47°. 40′ and E. lon. 7°. 15′.

ALTMORE, a town of Ireland, in the county of Tyrone, and province of Ulſter, ſituated in N. latit. 54°. 34′. and W. longit. 7°. 8′.

ALTMUL, a river of Germany, which ariſing in Franconia, runs ſouth-eaſt by the city of Anſpach; and continuing its courſe eaſt by Papenheim and Aichſtet, falls into the Danube at Kelheim, about twelve miles above Ratiſbon.

ALTO and BASSO, in law, denotes the abſolute ſubmiſſion of all differences high and low to ſome arbitrator.

ALTO-RELIEVO. See RELIEVO.

ALTO RIPIENO, in muſic, the tenor of the great chorus which ſings or plays only now and then in ſome particular places.

ALTORF, a town of Germany, in the circle of Swabia, ſituated in N. latitude 47° 46′. and E. longitude 9° 35′.

ALTORF is likewiſe the name of a town in the circle of Franconia, ſituated in N. latitude 49°. 20′. and E. longitude 11° 20′.

ALTORF is alſo the capital of the canton of Uri, in Switzerland, ſituated on the lake Lucern, in N. latitude 46°. 50′. and E. longitude 8°. 30′.

ALTZHEIM, or ALTZEY, a town of Germany, ſituated in N. latit. 49° 45′. and E. long. 7°. 52′. about forty-two miles north-weſt of Heidelberg.

ALVA DE TORMES, a town of Spain, in the Province of Leon, ſituated on the river Tormes, in N. latit. 41°. and W. long. 6°. about ſixteen miles ſouth-eaſt of Salamanca.

ALUDELS, in chemiſtry, are earthen pots ranged one above another, for retaining the flowers which aſcend in the proceſs of ſublimation. See the article SUBLIMATION.

The loweſt aludel is fitted to a pot, placed in the furnace, wherein is the matter to be ſublimed; and at top is a cloſe head, to retain the flowers which aſcend higheſt.

ALVEARIUM properly ſignifies a bee-hive, from *alveus*, a channel, or cavity. Hence,

ALVEARIUM; among anatomiſts, denotes the hollow of the auricle, or outer ear. See the article EAR.

ALVEOLUS, in natural hiſtory, properly denotes one of thoſe waxen cells, whereof the combs in bee-hives conſiſt. Theſe *alveoli*, or cells, ſerve for different purpoſes. As ſtore-houſes, they preſerve honey and wax for future uſe; and as nidufes, they ſerve to defend the embryo-bees while hatching. See the article BEE. Naturaliſts and mathematicians have beſtowed no little pains in examining the ſtructure of theſe cells; the form of which appears to be the moſt commodious that it is almoſt poſſible for art to invent, as requiring the leaſt wax to contain the ſame quantity of honey. The body of the cell is hexagonal, or conſiſts of ſix ſides; and the baſes are of a pyramidal figure, compoſed of three rhombuſes, the oblique angles of which have been found by menſuration to be nearly 110°, varying only about half a degree from what, by the ſtricteſt rules of geometry, they ought to be, *viz.* 109°. 28′. 16″.

As to the diſpoſition and arrangement of theſe cells in combs. See HONEY-COMB.

ALVEOLUS, in anatomy, the ſocket-like cavity in the jaws, wherein each of the teeth is fixed.

ALVEOLUS, in botany, a name given to the cells in which the ſeeds of certain plants, as the dipſacus and corona ſolis, are ranged.

ALVEOLUS, in the hiſtory of foſſils, a marine body, not known at preſent in its recent ſtate, but frequently found foſſile. The alveoli are of a conic ſhape, and compoſed of a number of cells, like ſo many bee-hives, jointed into one another, with a ſiphunculus, or pipe of communication, like that of the nautilus. They are ſometimes met with entire, but more frequently truncated, or with their ſmaller ends broken off.

ALVEUS, properly ſignifies a channel; and hence is uſed by ſome anatomiſts for the tumid lacteal veſſels, proceeding from the receptaculum chyli.

ALVEUS is alſo uſed in roman antiquity, for

for a kind of boat, fashioned out of the trunk of a single tree: such was that in which Romulus and Remus were exposed.

ALUM, *alumen*, in natural-history a peculiar kind of salt, separated by art from various substances. In Italy, it is obtained from a soft reddish stone; about Puteoli, from several kinds of earth; and in England, from a whitish or bluish stone, called irish slate.

In some parts of the world, alum is found pure; having been washed from its ore by water, and afterwards, on the evaporation of the water, left in a dry form.

Alum bears a near affinity to vitriol, in respect of the saline principle, *i. e.* the acid spirit, which is the same in both. It differs from vitriol, as this latter is found to have a metalline basis, *e. gr.* iron or copper; whereas the basis or matter of alum, wherewith the saline part is united, is an alcalious or chalky earth, or stone, resembling lime-stone, as appears from the origin and preparation of alum, and from the stony sediment it deposits by solution. See the article VITRIOL.

Alum also bears a near conformity with sulphur, as both are formed from the same saline spirit; which, if it meet with a stony substance, forms alum, with a bituminous one, sulphur. See the article SULPHUR.

Alum then is formed of the universal acid, or fluid salt combining with a chalky earth.—The same acid, with a mercurial earth forms common sea salt, and with a moist, rocky, or clay earth, sal gemmæ. This system is confirmed, by what naturalists have observed concerning the origin of the native alum in the isle of Chio. That island is a hollow spungy rock, penetrated on all parts by the sea-water. M. Tournefort considers the whole as a a natural laboratory, wherein the sea-water undergoes much the same action in it as in our retorts. By this means, an acid spirit is separated from it, which penetrating the substance of the rocks, dissolves and incorporates with them, and forms mines of alum. This seems hardly to be doubted, inasmuch as by pouring spirit of salt on common stones, or chalk, aluminous concretions are readily formed. The same spirit mixing with a bitumen under-ground, forms sulphur.

Some attribute the origin of alum chiefly to a sulphureous principle acting on, corroding of, and coagulating with a mineral substance, usually of a terrene and stony, rather than metallic nature, tho' that metal be often contained in the alum stone. That the sulphur is the chief efficient and material cause of this production, seems to appear hence, that many alum stones distilled *per descensum*, yield good brimstone, and all alum stones during calcination, emit a sulphureous steam. An inquisitive naturalist gathered from the very same rock, and that within a few inches of each other, both vitriol, alum, and sulphur, all of them excellent in their kind. Indeed those three minerals are so nearly allied, that an ingenious chemist assures us, he can, by some artifices, convert alum into vitriol, or vitriol into alum, the same to all intents and purposes, with the natural.

Alum is ranked by Homberg, and others, as an urinous neutral salt, on account of the urinous smell it exhales by burning, and its use in the volatilization of fixed salts. Yet some deny alum to belong to the class of salts, and rank it rather among stony substances; by reason that after dissolving alum, and precipitating the solution with oil of tartar *per deliquium*, the coagulation at the bottom, resembles a stony calx, and being exposed to the fire will neither melt nor sublime.

The ore of alum, if mature, yields its salt immediately, and without trouble; but if less mature, it requires a previous calcination, as is the case in many of our English alum stones; and if very crude or immature, it must not only be burnt, but a long time exposed to the air before it will yield its salt. From this it appears, that the alum is not a genuine and native salt, but is composed by the acid of sulphur, corroding some peculiar earth or stone, as vitriol is by its corroding some metal; and that, in both these operations, this corroding acid can sometimes perform its business, while it lies in the bowels of the earth; and sometimes while it lies in the open air, tho' it failed of it while buried.

Alum distilled into an acid spirit, with copper, or iron, becomes good vitriol; and vitriol freed from its metallic parts becomes aluminous; and, being distilled, yields a spirit not to be distinguished by the taste from that of alum, and even scarce by the most accurate scrutiny. Rectified oil of vitriol, or spirit of sulphur, of the same degree of strength, will sometimes concrete into a solid and transparent substance, resembling crystallized alum; and this substance is nowise different whether prepared by one or the other of these ways, and in both resembles

bles the pureſt alum, ſo as not to be diſtinguiſhable from it unleſs by taſting it. Alum ores generally contain vitriol as as well as alum, and are capable of great fermentation, when expoſed to the air, tho' they would never have been ſubject to it while buried in the earth. They will become ſo hot in the heap, that it is ſcarce poſſible to endure the hand upon them; and ſometimes will break out into abſolute flame. The acid and the ſulphur they contain are the occaſion of this, as, according to Sympſon, and ſome others, they are of all ſubterranean fermentations and heats; and the whole is not badly explained, by the familiar inſtance of adding water to rectified oil of vitriol. The acid and the ſulphur of that fluid are, as in theſe ores, ſo combined as not to exert their forces naturally againſt one another, but all is quiet as in theſe ſtones while under-ground, but the water does to the one, what the air does to the other; ſends in a third, which not agreeing with either of the other, diſturbs and ſets their particles in motion, and the veſſel containing the liquid becomes as hot to the touch in the one caſe, as the ſolids themſelves are in the other.

Proceſs of making ALUM. At Whitby, in Yorkſhire, alum is made thus: having burnt a quantity of the ore with whins, or wood, till it becomes white; they then barrow it in a pit, where it is ſteeped in water for eight or ten hours. This liquor, or lixivium, is conveyed by troughs to the alum-houſe into ciſterns, and from them into the pans, where it is boiled about twenty-four hours. Then add a certain quantity of the lee of kelp; the whole is drawn off into a ſettler; where having remained about an hour, that the ſulphur and other dregs may have time to ſettle to the bottom, it is conveyed into coolers. This done, to every tun of the liquor they add about eight gallons of urine; and having ſtood four days and nights, till quite cool, the alum begins to cryſtalize on the ſides of the veſſel, from which being ſcraped off, it is waſhed with fair water, and then thrown in a bing, to let the water drain off. After this it is thrown into a pan, called the roching pan, and there melted; in which ſtate it is conveyed by troughs into tuns, where it ſtands about ten days, till perfectly condenſed. Then ſtaving the tuns, the alum is taken out, chipped, and carried to the ſtore-houſes.

This is what we commonly call roche or rock alum, as being prepared from ſtones cut from the rocks of the quarry; and ſtands contradiſtinguiſhed from the common alum, or that prepared from earths. The method of making alum in Italy is ſomewhat different from the former.

Mr. Geoffroy had an exact information, in Italy, of the method of making roche-alum at Civita Vecchia. Near that city are quarries of a greyiſh or reddiſh ſtone, pretty hard, like the travertin. They calcine theſe ſtones in kilns; and then boil the calx in water over a ſtrong fire. The water diſſolves all the ſalt contained in the calx, and there remains an inſipid earth. The water, thus impregnated, is left to cool, and the ſalt ſhoots into cryſtals, like tartar, about the ſides and bottom of the caſk, which is the roche-alum.

Properties and uſes of ALUM. In medicine alum is a very valuable and powerful aſtringent: the old authors are full of its praiſes in ſtopping hæmorrhages of all kinds, in faſtening the teeth, and in ſtrengthening the gums; on this account it was an ingredient in all their dentifrices, and obtains a place in moſt of ours to this day. Alum, mixed with honey, cures the aphthæ; and with the juice of knot-graſs, is good for exanthemata and rheums in the ears; with cabbage-leaves and boiled honey, it is effectual in the leproſy; and very good in warm water to make a fomentation for the itch, paronychia, pterygia, and kibes; to ſcour away all nits and lice, and to anoint ſcalds or burns.

Alum, in colouring and dying, not only ſerves to bind the colour upon the ſtuffs, and has the ſame uſe there that gum-water and glutinous oils have in painting, but likewiſe diſpoſes ſtuffs to take colour, and adds a briſkneſs and elegance to them. It alſo preſerves paper that has been dyed in its water, from ſinking when wrote upon; and is therefore extremely proper for waſhing prints deſigned to be coloured, for it will not only fix the paper ſo that the colours will not run, but will alſo help to brighten them.

In whatever form alum is found, whether naturally pure, in rough ore, or purified by art, when diſſolved and made into a pure ſalt, it exhibits the ſame marks and characters: it will not run *per* deliquium, or melt to a fluid in a moiſt air. It requires fifteen times its own weight of water to diſſolve it perfectly; and when a proper

proper quantity of that is evaporated, it forms octogonal cryſtals, of a ſweet, auſtere and very ſtyptic taſte.

A ſolution of alum coagulates milk, turns the tincture of heliotropium purple, makes no alteration in the ſolution of corroſive ſublimate, turns the infuſion of galls turbid and whitiſh; with ſalt of tartar it concretes into a white coagulum, without any ſenſible heat or ſmoke; and often upon mixing this ſolution with oil of tartar, an urinous ſmell is perceived; but this only happens when the alum has been purified with urine. There is no ſuch ſmell from the roman alum.

Artificial ALUM, that prepared by art, in contradiſtinction from the native alum.

Artificial alum is alſo uſed for alum produced by cauſing burnt earthen veſſels imbibe a large quantity of oil of vitriol; the effect of which is, that they are thereby reduced to a mucilage, which being expoſed to the open air, affords cryſtals of pure alum. Tobacco-pipes, wetted with ſpirit of ſulphur, likewiſe afford beautiful cryſtals of plumoſe allum. See the article *Plumoſe* ALUM, *infra*.

Burnt ALUM is that melted in a fire-ſhovel, or crucible, where it is allowed to bubble till it becomes a white hard ſubſtance.

The watry part of the alum being thus expelled, the remainder is left poſſeſſed of all its acids, leſs clogged, and more in a condition to exert its effects. It proves a gentle eſcharotic, and is uſed in ſmall quantities, mixed with other ingredients, in tooth-powders.

Native ALUM, or *Foſſile* ALUM, that formed by nature, without the aſſiſtance of art.

There are ſtill mines of native alum in the iſland of Chio, conſiſting of a kind of vaults, or apartments, cruſted over with alum, which may be looked upon as exfoliations from the rock.

Plumoſe ALUM, or *Plume* ALUM, a kind of natural alum, compoſed of a ſort of threads, or fibres, reſembling feathers; whence it has its name.

Prepared ALUM, or *Purified* ALUM, that which is diſſolved in hot rain-water, and afterwards made to cryſtallize, by evaporating the water.

Roche-ALUM, or *Rock*-ALUM. See the article *Proceſs of making* ALUM, *ſupra*.

Roman ALUM, a ſort of rock alum, of a reddiſh colour, made in the country near Rome.

Saccharine ALUM is a compoſition of common alum with roſe-water and the whites of eggs, which being boiled to the conſiſtence of a paſte, is formed in the ſhape of a ſugar-loaf; hence it obtained its name; it is uſed as a coſmetic.

ALUM-WATER. See the next article.

ALUMINOUS, an appellation given to ſuch things as partake of the nature and properties of alum. See ALUM.

ALUMINOUS WATERS, thoſe impregnated, either naturally or artificially, with the virtues of alum.

Of the former kind is the ſpaw at Scarborough repreſented to be; and of the latter, the *aqua aluminoſa* of the ſhops. See the articles SCARBOROUGH, and AQUA *aluminoſa*.

ALVUS, in anatomy, denotes the lower belly, or *venter*; but Celſus uſes it to ſignify the belly relative to ſtools. Thus *Alvus liquida* is when the fæces are liquid, and *alvus adſtricta* when the belly is bound.

ALYSSOIDES, in botany, a ſpecies of alyſſum, with cruciform flowers, and elliptical fruit, divided by an intermediate membrane into two cells, which contain a conſiderable number of orbicular, flat, and marginated ſeeds. See plate XIV. fig. 2. and the next article.

ALYSSO, or ALYSSUM, MAD-WORT, in botany, a genus of the tetradynamia ſiliculoſa claſs of plants; the flower is of the cruciform kind, and conſiſts of four leaves: the fruit is a ſmall roundiſh capſule, divided into two cells, in which are contained a number of ſmall roundiſh ſeeds. See plate XIV. fig. 3.

As to the medicinal virtues of alyſſon, it is ſaid to be aperitive, and good for the bite of a mad dog; being of a very penetrating and diaphoretic nature, and agreeing in other reſpects with the ſcurvy-graſs.

ALYTARCHA, a prieſt of Antioch, in Syria, who, in the games inſtituted in honour of the gods, preſided over the ἀλύται, or officers who carried rods to clear away the crowd, and keep order.

In the olympic games, the alytarches had the ſame command, and obliged every perſon to preſerve order and decency.

ALZIRA, a town of Spain, in the province of Valencia, ſituated on the river Xucar, about eighteen miles ſouth of the city of Valencia. W. lon. 20° N. lat. 39°. 10'.

AMABYR, or AMVABYR, a barbarous cuſtom which formerly prevailed in Wales and ſome other parts of the kingdom; being a certain fine, or ſum of money, paid to the lord, upon marrying a maid within his manor.

AMADABAT, a large, populous, trading city in the East-Indies, the capital of the province of Guzurat, or Cambay, and ſituated in 72° eaſt longitude, and 23° 40′ north latitude.

AMADANAGER, a town in the higher peninſula of India, ſituated in 74° 15′ eaſt longitude, and 18° north latitude.

AMADIA, a city of aſiatic Turky, in the province of Curdeſtan, ſituated on a high mountain, in 43° eaſt longitude, and 37° north latitude.

AMAIN, or AMAYNE, in the ſea-language, a term importing to lower ſomething at once. Thus, to ſtrike amain, is to lower, or let fall, the top-ſails; to wave amain, is to make a ſignal, by waving a drawn ſword, or the like, as a demand that the enemy ſtrike their top-ſails.

The term amain, is alſo uſed in lowering a yard, or letting any thing down into the hold, as a word of command to do it gently, and by degrees.

AMAK, or AMAKA, an iſland of Denmark, lying in 13° 5′. eaſt longitude, and 55° 29′ north latitude, and ſeparated by a very narrow channel from Copenhagen.

AMALFA, a city of Italy, in the kingdom of Naples, and province of the hither Principato. It is the ſee of an archbiſhop, and remarkable for giving birth to Flavius Blendus, inventor of the ſeaman's compaſs. Eaſt longitude 15° 20′, north latitude 48° 50′.

AMALGAM, *amalgama*, denotes a maſs of mercury united and incorporated with ſome metal. See AMALGAMATION.

Amalgams grow ſoft with heat, and hard with cold; and the metals amalgamated with mercury, aſſume a conſiſtence harder or ſofter, in proportion to the quantity of mercury employed in the amalgam.

Amalgams are uſed either to render a metal fit to be extended on ſome works, as in gilding; or elſe to reduce the metal into a very ſubtile powder.

Thus gilders, to lay gold on any other body, diſſolve it in hot mercury; which done, they apply the ſolution on the body to be gilt, then ſetting it over the coals, the mercury evaporates, and leaves the gold adhering to the body like a cruſt.

The amalgams of gold, ſilver, tin, lead, zinc, biſmuth, and copper, are all white; and when the proportion of the quantity of the metal to that of mercury is conſiderable, they form a kind of paſte.

AMALGAMATION, in chemiſtry, the operation of making an amalgam, or of mixing quickſilver with ſome metal, is performed by fuſing, or at leaſt igniting the metal, and in this ſtate adding a proportion of mercury to it; upon which they mutually attract and incorporate with each other.

Of all metals, gold unites with mercury with the greateſt facility; next to that, ſilver; then lead, tin, and every metal, except iron and copper, the laſt of which incorporates with quickſilver with great difficulty, and the former ſcarce at all.

The amalgam of gold is thus made: take a dram of the regulus of gold, beat it into very thin plates, and upon theſe, heated in a crucible red hot, pour an ounce of quickſilver; ſtir the matter with an iron rod, and when it begins to fume, caſt it into an earthen pan filled with water, and it will coagulate and become tractable. Gold will retain about thrice its weight of mercury.

To make an amalgam of lead: melt clean lead in an iron ladle, add to it an equal weight of heated mercury, ſtir them together with an iron rod, then let them cool, and you will have an uniform maſs of a ſilver colour, ſomewhat hard, but growing ſofter and ſofter by trituration. Put this maſs into a glaſs mortar, grind it, and mix with it any quantity of mercury at pleaſure, and it will unite with it, as ſalt with water.

The amalgam of tin is made exactly in the ſame manner, and this alſo may be diluted by the addition of mercury.

To have an amalgam of copper; take a ſolution of pure copper, made in aqua fortis, ſo ſtrong that the aqua fortis could diſſolve no more of the metal; dilute the ſolution with twelve times its quantity of fair water; heat the liquor, and put into it poliſhed plates of iron, and the copper will be precipitated in a powder to the bottom, while the iron will be diſſolved: proceed thus till all the copper is fallen, pour off the liquor, waſh the powder with hot water, till it becomes perfectly inſipid: then dry the powder, and grind it in a glaſs mortar with an equal weight of hot quickſilver, and they will unite into an amalgam, which will alſo receive a further addition of mercury. An amalgam of copper in any other way is very difficult to make.

Pure ſilver precipitated from aqua fortis, may in the ſame manner be made into an amalgam.

From theſe operations we may perceive, that

that the making of amalgams is the foundation of the art of gilding, both in gold and silver, and that metals by that art may be mixed, confounded, and secretly concealed among one another.

AMANCE, a town of Lorrain, situated in 6° 10′ east longit. and 48° 40′ north latitude, about seven miles north-east of Nancy.

AMAND, or ST. AMAND, the name of two towns; one situated in the dutchy of Bourbon, in the province of Lyonois, in France; and the other in french Flanders, about six miles north of Valenciennes.

AMANTEA, a sea-port town and bishop's see of the kingdom of Naples, situated near the bay of Euphemia, in the province of Calabria, in 16° 20′ east longitude, and 39° 15′ north latitude.

AMAPALLA, a sea-port town of Mexico, in the province of Guatimala, situated on the Pacific ocean, in 93° west longitude, and 12° 30′ north latitude.

AMARANTA, or AMARANTE, an order of knighthood, instituted in 1653, by Christina queen of Sweden, in memory of a masquerade, wherein she had assumed that name, which signifies unfading, or immortal. Her nobility likewise assumed different characters, *viz.* of gods, goddesses, shepherds, nymphs, *&c.* and so well pleased was the queen with the diversion, that she instituted this order in memory of it, consisting of sixteen lords and as many ladies, with the motto *dolce nella memoria.*

AMARANTH, *amaranthus*, in botany, the name of a genus of plants, sometimes called prince's feather, the flower of which is rosaceous, and its fruit an oval or roundish capsule, containing only one large seed of a roundish compressed shape. See plate XV. fig. 1.

All the species of this genus, which belongs to the *monoecia-pentandria* class of Linnæus, are drying and astringent; accordingly we find the flowers of the common large garden-kind, dried and powdered, recommended in diarrhœas, dysenteries, and hæmorrhages of all kinds, as well as for incontinence of urine.

AMARANTHOIDES, in botany, a species of gomphrena, with flosculous flowers collected into a squamose head and a roundish fruit. See plate XV. fig. 2. and the article GOMPHRENA.

The flowers of the amaranthoides have got the appellation of everlasting; because, if gathered in full perfection, and kept in a dry place, they will retain their beauty many years.

AMARYLLIS, in botany, a genus of the *hexandria-monogynia* class of plants, the corolla whereof consists of six lanceolated petals; the fruit is an oval or nearly oval capsule, formed of three valves, and containing three cells; the seeds are numerous; the inflection of the petals, stamina and pistil, in this genus is very different in the various species.

This genus comprehends the lilio-narcissus of Tournefort and Dellenius, and the Guernsey-lily.

AMASIA, the northern division of lesser Asia, lying on the south shore of the Euxine sea.

Amasia is also the name of the capital city of the above province, situated in 36° east longitude and 42° north latitude; about seventy miles south of the Euxine sea.

AMATORII *musculi*, in anatomy, those muscles of the eyes that draw them sideways, and assist in the look called ogling. The *amatorii musculi* are otherwise called the *obliquus superior*, or *trochlearis*, and the *obliquus inferior*. See the articles OBLIQUUS and TROCHLEARIS.

AMAUROSIS, *αμαυρωσις*, among physicians, a distemper of the eye, otherwise called *gutta serena*. See GUTTA *serena*.

AMAZON, in a general sense, denotes a bold daring woman, whose breasts have been cut off, to render her more fit for fighting.

AMAZONS, in a more limited sense, were an antient nation of women, inhabiting that part of lesser Asia now called Amasia. See the article AMASIA.

The Amazons are said to have killed all their male children, and to have cut off the right breasts of their females, to fit them for martial exercises. The existence, however, of such a nation is controverted by many judicious authors, and defended by others, particularly Mr. Petit, who has published a dissertation on the subject, wherein are several curious inquiries concerning their arms, dress, *&c.* We also read of scythian Amazons, of german Amazons, of lybian Amazons, and Amazons of America, living on the banks of the great river which bears their name, who are represented as governed by a queen, no men being permitted to live among them; only, at a certain season, those of the neighbouring nations are suffered to visit them, for the sake of procreation. The Amazons of

Lybia are famous for their wars with another female nation, called Gorgons. See the article GORGONS.

On medals, the buſt of the Amazons is ordinarily repreſented armed with a little battle-ax, called by the Romans *bicepſ*, or *ſecuris*, which they carried on their ſhoulder, with a ſmall buckler in form of a half moon, diſtinguiſhed by the name of *pelta*, upon their left arm.

AMAZON, in geography, a great river of ſouth America, which riſing in Peru, near the equator, runs eaſtward a courſe of more than three thouſand miles; and, like other rivers between the tropics, annually overflows its banks, at which ſeaſon it is about one hundred and fifty miles broad, where it falls into the Atlantic ocean.

AMAZONIAN, in a general ſenſe, denotes ſomething belonging to the Amazons. See the article AMAZON.

AMAZONIAN, *amazonius*, among antient phyſicians, an epithet given to a troch, which is prepared of the ſeeds of ſmallage and aniſe, the tops of wormwood, myrrh, pepper, opium, caſtor, and cinnamon. It is generally called the Amazon's troch, and is preſcribed for pains of the ſtomach, and bilious vomitings.

AMBAGES, an idle circumlocution, or vain connecting together of words and ſayings, remote from the true purpoſe of the ſpeaker. See CIRCUMLOCUTION.

AMBAMARJAM, or AMBARA, the capital city of Abyſſinia, or higher Ethiopia, ſituated on the ſide of a lake, out of which the river Nile iſſues; in 35° eaſt longitude, and 13° ſouth latitude.

AMBARVALIA, in antiquity, a ceremony among the Romans, when, in order to procure from the gods an happy harveſt, they conducted the victims thrice round the corn-fields in proceſſion, before ſacrificing them.

Ambarvalia were either of a private or public nature: the private were performed by the maſter of a family, and the public by the prieſts who officiated at the ſolemnity, called *fratres arvales*.

The prayer preferred on this occaſion, the formula of which we have in Cato, de Re Ruſt. cap. cxlii. was called *carmen ambarvale*.

At theſe feaſts they ſacrificed to Ceres a ſow, a ſheep, and a bull or heifer, whence they take the name of *ſuovetaurilia*.

The method of celebrating them was, to lead a victim round the fields, while the peaſants accompanied it, and one of their number, crowned with oak, hymned forth the praiſes of Ceres, in verſes compoſed on purpoſe.

This feſtival was celebrated twice a year, at the end of January, according to ſome, or in April, according to others; and for the ſecond time, in the month of July: but we have nothing certain as to the particular day.

AMBASSADOR, the ſame with embaſſador. See the article EMBASSADOR.

AMBE, among ſurgeons, an inſtrument for reducing diſlocated bones, conſiſting of a horizontal leaver, moved by a hinge, upon a vertical ſtandard, or foot.

This is the ambe of Hippocrates, which being found inconvenient, new improvements of it have been made. See the article *Luxation of the* HUMERUS.

AMBE, among anatomiſts, a term uſed for the ſuperficial jutting out of a bone. See the article BONE.

AMBER, *ſuccinum*, or *electrum*, in natural hiſtory, a pellucid and very hard inflammable ſubſtance, of one uniform ſtructure, of a bituminous taſte, of a very fragrant ſmell when rubbed, and highly endowed with the property which from it is called electricity.

Origin and nature of AMBER. Naturaliſts have been extremely in the dark about the origin of amber: ſome have maintained it an animal ſubſtance, others take it for a reſinous juice oozing from poplars and firs, frequent on the coaſts of Pruſſia, where it is found in great abundance. But the generality of authors contend for its being a bitumen, which trickling into the ſea from ſome ſubterraneous ſources, and then mixing with the vitriolic ſalts which abound in thoſe parts, becomes congealed and fixed; the reſult of which congelation is amber. However, as good amber is found in digging at a great diſtance from the ſea, it is moſt probable that it is wholly of mineral origin, and is a bitumen, once liquid, of the *naphtha* or *petroleum* kind, hardened into its preſent ſtate by a mineral acid, of the nature of ſpirit of ſulphur, or oil of vitriol; more eſpecially as theſe ſubſtances abound in the earth, and an artificial mixture of them produce a body very much like native amber, and affording all its principles on a chemical analyſis.

The natural colour of amber is a fine pale yellow, but it is often made white, ſometimes black, and in both caſes is rendered opaque by the admixture of extra-

LEVUR

neous bodies. Sometimes it is tinged with metalline particles, and remains pellucid; but the moſt frequent variation from the yellow, is into a duſky brown.

Properties, preparations, and uſes of AMBER. Amber is hard, dry, tranſparent, toughiſh though brittle ſubſtance, of a ſtyptic taſte, and, when warm, of a peculiar fragrant tartiſh ſmell. It makes no effervescence with acids; and when rubbed ſo as to heat, it will attract ſtraws, bits of paper, or any other light ſubſtance, and even metals in thin pieces, as leaf-braſs and the like. It is one of the lighteſt foſſils we know, is ſoluble in ſpirit of wine, in the eſſential oils of plants, and likewiſe, though with much difficulty, in ſome of the expreſſed oils, as that of linſeed. On a chemical analyſis, it yields at firſt a ſubacid water, and afterwards a yellow fetid oil, and a volatile ſalt; the remainder in the retort being a black, light, and friable matter, reſembling in colour the *bitumen judaicum*. The preparations of amber in uſe are, 1. Salt of amber, *ſal ſuccini*. 2. The oil of amber, *oleum ſuccini*. 3. Tincture of amber, *tinctura ſuccini*. The ſalt and oil of amber are obtained by the ſame proceſs: the ſalt is a true acid, and the only one that is obtained in a ſolid ſaline form; the oils greatly reſemble the native *petrolea* or *naphthæ*, the ſubſtances from which amber was formed. The ſalt is diaphoretic, and diuretic; is eſteemed in convulſions, head-achs, and all nervous and hyſteric complaints. The oil, by rectification, becomes a good antihyſteric and emmenagogue, being very ſubtile and penetrating: externally, it is of uſe in reſtoring contracted paralytic limbs. Tincture of amber is procured by digeſtion in ſpirit of wine, with a ſand-heat; and has all the virtues of amber in the ſubſtance.

The mechanical uſes of amber are ſeen in toys, cabinets, utenſils, and the better ſort of varniſhing. In medicine, being reduced to powder, it is given in the *fluor albus*, convulſions, and in all diſorders of the nerves.

AMBER, in geography, a river, which, riſing in the ſouth-weſt part of Bavaria, runs north-eaſt by Lanſperg and Dachau, and falls into the Iſer, a little above Landſhut.

AMBERG, a fortified town of Bavaria, ſituated on the river Ils, about thirty miles north of Ratiſbon, in 12° eaſt longitude, and 49° 25′ north latitude.

AMBERGREASE, or AMBERGRISE, *ambra griſia*, in natural hiſtory, a ſolid, opaque, and fragrant ſubſtance, of a greyiſh or aſh colour, and melting almoſt like wax.

Nature and origin of AMBERGRISE. The opinions concerning the nature and origin of ambergriſe are as various as thoſe relating to amber. Some take it for the excrement of a bird, which being diſſolved by the heat of the ſun, and waſhed off the ſhore by the waves, is ſwallowed by whales, who return it in the condition we find it. Others ſuppoſe it a ſpongy earth, waſhed into the ſea, where it floats, being lighter than the water. Others imagine it a ſort of gum, which exſudating from trees, drops into the ſea, and congeals into ambergriſe. Others contend for its being formed from honey-combs, which fall into the ſea from the rocks where the bees had formed their neſts. And, laſtly, others will have it a ſort of bituminous juice, which ſprings out of the bottom of the ſea, as *naphtha* does out of ſome ſprings, and there thickens and hardens. But the later writers have referred it to the mineral kingdom, to which, in all probability it belongs, being a frothy and light bitumen exſudating out of the earth in a fluid form, and diſtilling into the ſea, where it hardens, and floats on the ſurface, or is thrown upon the ſhore. Ambergriſe is found on the ſea-coaſts, particularly thoſe of Africa, from the Cape of Good-hope to the Red-ſea, in lumps ſometimes very large, in the middle of which we frequently meet with ſtones, ſhells and bones.

Properties, preparations, and uſes of AMBERGRISE. Ambergriſe is a coarſe irregular ſubſtance, of a lax incoherent texture, remarkably light, ſo as not to ſink in water, of a rugged ſurface, very ſoft and fatty, and when moſt pure and perfect is of a light grey colour, a ſtrong ſcent, and being pricked with a hot needle yields an odorous ſmell. It is neither ſoluble, nor makes the leaſt effervescence with any acid. It melts very freely over a fire, into a kind of yellow roſin. It is inflammable, and burns with a bright whitiſh flame; and is ſoluble in ſpirit of wine, which, however, does not take up its whole ſubſtance, but always leaves a remainder in form of a black bituminous matter. On analyſis it yields by diſtillation,

tion, firſt a quantity of inſipid phlegm, then an acid ſpirit with a yellowiſh oil, and a ſmall portion of an acid ſalt.

Ambergriſe is much uſed by perfumers, in giving a rich ſweet odour in mixture, eſpecially with muſk. In medicine it is a very high cordial, of great uſe in convulſions, with us; and with the eaſtern nations is in great repute as a provocative to venery, and a prolonger of life. The only preparation of ambergriſe in uſe, is its tincture or eſſence, which has all the virtues of the ambergriſe in ſubſtance.

AMBIDEXTER, a perſon who can uſe both hands with the ſame facility, and for the ſame purpoſes, that the generality of people do their right hands.

Were it not for education, ſome think that all mankind would be ambidexters; and, in fact, we frequently find nurſes obliged to be at a good deal of pains before they can bring children to forego the uſe of their left hands. It is the more pity, that any of the gifts of nature ſhould be thus rendered in a great meaſure uſeleſs, as there are many occaſions in life which require the equal uſe of both hands: ſuch are the operations of bleeding in the left arm, left ancle, &c.

AMBIDEXTER, among lawyers, a juror or embraceor, who accepts money of both parties, for giving his verdict; an offence for which he is liable to be impriſoned, forever excluded from a jury, and to pay ten times the ſum he accepted of. See the article DECIES TANTUM.

AMBIEGNÆ OVES, in the heathen ſacrifices, an appellation given to ſuch ewes as, having brought forth twins, were ſacrificed together with their two lambs, one on each ſide. We find them mentioned among other ſacrifices to Juno.

AMBIENT, a term uſed for ſuch bodies, eſpecially fluids, as encompaſs others on all ſides: thus, the air is frequently called an ambient fluid, by reaſon it is diffuſed round all terreſtrial bodies.

AMBIGENAL HYPERBOLA, a name given by ſir Iſaac Newton to one of the triple hyperbolas of the ſecond order, having one of its infinite legs falling within an angle formed by the aſymptotes, and the other falling without. See HYPERBOLA.

AMBIGUITY, in rhetoric and grammar, a defect of language, whereby words are rendered ambiguous. See the next article.

AMBIGUOUS, a term applied to a word or expreſſion which may be taken in different ſenſes. See EQUIVOCAL.

The reſponſes of the antient oracles were always ambiguous. See ORACLE.

AMBILLON, a village of France, in Touraine, where there is a great quarry for mill-ſtones.

AMBIT, *ambitus*, in geometry, is the ſame with what is otherwiſe called the perimeter of a figure. See the article PERIMETER.

AMBITUS, in roman antiquity, the act of ſetting up for ſome magiſtracy, or office, and formally going round the city to ſolicit the intereſt and votes of the people.

On theſe occaſions it was not only uſual to ſolicit the intereſt of their friends and others, with whom they were perſonally acquainted; but the candidates, being attended by perſons of an extenſive acquaintance, who ſuggeſted to them the names of the citizens, and thence called *nomenclatores*, or *interpretes*, made their application to all they met. This method of ſuing for offices was deemed allowable, and therefore never prohibited by law; but to reſtrain all undue influence, whether by bribery, or by exhibiting games, ſhews, and the like, many laws were enacted, and ſevere fines impoſed.

AMBLE, in horſemanſhip, a peculiar pace by which a horſe's two legs of the ſame ſide move at the ſame time.

Many methods have been propoſed to bring a young horſe to amble: ſome try it by new ploughed fields; ſome endeavour to bring him to amble from the gallop; and many uſe weights: ſome attempt to procure an amble in hand, ere they mount his back; others, by the help of hind ſhoes, made on purpoſe; others, by folding fine ſoft liſts about the gambrels of the horſe; and others, by the tramel.

All theſe methods, however, are attended with great danger to the horſe; and the beſt way is to try with the hand, by a gentle deliberate racking of the horſe, by helping him in the weak part of the mouth with a ſmooth, big, and full ſnaffle, and correcting him firſt on one ſide, then on the other, with the calves of your legs, and ſometimes with a ſpur.

AMBLETEUSE, a ſmall ſea-port town of Picardy, in France, ſituated about five miles north of Boulogne.

AMBLYGON, *amblygonium*, in geometry, denotes an obtuſe-angled triangle; or a triangle, one of whoſe angles conſiſts of more than ninety degrees.

AMBLY-

AMBLYOPY, ἀμβλυωπία, among phyſicians, denotes the ſame with *gutta ſerena*. See the article GUTTA *ſerena*.

AMBO, or AMBON, in eccleſiaſtical antiquity, a kind of pulpit, or reading-deſk, where that part of the divine ſervice called the gradual, was performed. See the article GRADUAL.

Beſides the goſpel, which was read at the top of the ambo, and the epiſtle, which was read a ſtep lower, they likewiſe publiſhed from this place the acts of the martyrs, the commemoration of departed ſaints, and the letters of peace and communion, ſent by one church to another: here too converts made a public profeſſion of their faith; and biſhops, their defence, when accuſed: treaties alſo were ſometimes concluded, and the coronations of emperors and kings performed in the ſame place.

AMBOS, a town of Orleanois, in France, ſituated on the river Loire, about ten miles eaſt of Tours, in 1° eaſt longitude, and 47° 25′ north latitude.

AMBOYNA, an iſland of the Eaſt-Indies, lying between the Molucca iſlands and thoſe of Banda, in 126° eaſt longitude, and 3° 40′. ſouth latitude.

In this iſland, which is about ſeventy miles in circumference, the Dutch have a ſtrong fort, garriſoned by ſeven or eight hundred men. What makes it the more remarkable, is the cruel uſage and expulſion of the engliſh factors by the Dutch, in the reign of king James I.

AMBRESBERRY, a market-town in Wiltſhire, about ſix miles north of Saliſbury, and ſituated in 1° 40′ weſt longitude, and 51° 20′ north latitude.

AMBROSE, or *St.* AMBROSE *in the wood*, an order of religious, who uſe the ambroſian office, and wear an image of that ſaint engraven on a little plate: in other reſpects they conform to the rule of the auguſtins. See the articles AMBROSIAN OFFICE, and AUGUSTINS.

AMBROSIA, in heathen antiquity, denotes the ſolid food of the gods, in contradiſtinction from the drink, which was called nectar. See the article NECTAR. It had the appellation ambroſia, as being ſuppoſed to render thoſe immortal who fed thereon. However, Lucian makes himſelf merry at the expence of this divine food, which, according to him, could not have been ſo excellent as it is repreſented by the poets, ſince the gods are ſaid to have left it for the fat and blood of ſacrifices, which they came to ſuck from the altars like flies.

AMBROSIA is alſo an appellation given to certain medicines, freed from their groſſer parts, and ſaid to be poſſeſſed of extraordinary virtues; in which ſenſe it amounts to much the ſame with quinteſſence. See the article QUINTESSENCE.

AMBROSIA, among antient naturaliſts, a term uſed for the rough or crude wax, ſuppoſed to be the food of bees. See the article WAX.

AMBROSIA, in botany, the name of a diſtinct genus of plants, with floſculous flowers, compoſed of ſeveral ſmall infundibuliform floſcules, divided into five ſegments: theſe, however, are barren; the fruit, which in ſome meaſure reſembles a club, growing on other parts of the plant. See plate XV. fig. 3.

This genus belongs to the *monoecia-pentandria* claſs of Linnæus.

It is of a repelling and aſtringent quality, revives the heart and brain, ſtops fluxes, and is preſcribed both externally and internally.

AMBROSIAN OFFICE, in church-hiſtory, a particular formula of worſhip in the church of Milan, which takes its name from St. Ambroſe, who inſtituted that office in the fourth century. Each church originally had its particular office; and when the pope, in after-times, took upon him to impoſe the roman office upon all the weſtern churches, that of Milan ſheltered itſelf under the name and authority of St. Ambroſe; from which time the ambroſian ritual has prevailed, in contradiſtinction from the roman ritual.

AMBRY, a place in which are depoſited all utenſils neceſſary for houſe-keeping. In the antient abbies and priories, there was an office under this denomination, wherein were laid up all charities for the poor.

AMBUBAJÆ, in roman antiquity, were immodeſt women, who came from Syria to Rome, where they lived by proſtitution, and by playing on the flute: the word is derived from the ſyriac *abbub*, which ſignifies a flute; although others make it come from *am* and *Baiæ*, becauſe theſe proſtitutes often retired to Baiæ. According to Cruquius, theſe women uſed likewiſe to ſell paint for ornamenting the face, &c.

AMBULATION, the ſame with walking. See the article EXERCISE.

AMBULATION, in ſurgery, a term given to the

the ſpreading of a gangrene or mortification.

AMBULATORY, a term antiently appliedt o ſuch courts as were not fixed, but removed ſometimes to one place, ſometimes to another: thus the court of parliament and court of king's bench were formerly ambulatory.

AMBURBIUM, in roman antiquity, a proceſſion made by the Romans round the city and *pomærium*, in which they led a victim, and afterwards ſacrificed it, in order to avert ſome calamity that threatened the city.

Scaliger, in his notes upon Feſtus, will have the *amburbium* to be the ſame with the *ambarvale*; but Servius, upon the third eclogue makes a diſtinction between them. See the article AMBARVALIA.

AMBURY, or ANBURY, among farriers, denotes a tumour, wart, or ſwelling, which is ſoft to the touch and full of blood. This diſorder of horſes is cured by tying a horſe-hair very hard about its root; and when it has fallen off, which commonly happens in about eight days, ſtrewing ſome powder of verdegris upon the part, to prevent the return of the complaint. If the tumour be ſo low, that nothing can be tied about it, they cut it out with a knife, or elſe burn it off with a ſharp hot iron; and in ſinewy parts, where a hot iron is improper, eat it away with oil of vitriol, or white ſublimate.

AMBUSCADE, or AMBUSH, in the military art, properly denotes a place where ſoldiers may lie concealed, till they find an opportunity to ſurpriſe the enemy.

AMBUSTION, *ambuſtio*, among phyſicians, the ſame with what we commonly call a burn. See the article BURN.

AMBY, a town of the auſtrian Netherlands, in the province of Limburg, ſituated oppoſite to Maeſtricht, on the eaſt ſide of the river Maeſe, in 5° 45′ eaſt long. and 50° 56′ north latitude.

AMELIA, a city of Italy, ſituated on a mountain, about fifty miles north-eaſt of Rome, in 13° 20′ eaſt longitude, and 42° 40′ north latitude.

AMEN, in the ſcripture language, a ſolemn formula, or concluſion to all prayer, ſignifying *ſo be it*.

The term *amen* is hebrew, being derived from the verb *aman*, *i. e.* to be true, faithful, &c. ſo that, ſtrictly ſpeaking, it ſignifies truth; and, uſed adverbially, as is frequently done in the goſpels, truly or verily. Sometimes it is repeated twice together, and then it ſtands for the ſuperlative, as *amen, amen, dico vobis*.

AMENABLE, or AMAINABLE, among lawyers, one that may be led or governed, a term commonly applied to a woman governable by her huſband.

AMEND, or AMENDE, in the french cuſtoms, a pecuniary puniſhment impoſed by a judge for any crime, falſe proſecution, or groundleſs appeal.

Amende honorable, an infamous kind of puniſhment inflicted, in France, upon traitors, parricides, or ſacrilegious perſons, in the following manner: the offender being delivered into the hands of the hangman, his ſhirt is ſtripped off, and a rope put about his neck, and a taper in his hand; then he is led into court, where he muſt beg pardon of God, the king, the court, and his country. Sometimes the puniſhment ends here, but ſometimes it is only a prelude to death, or baniſhment to the gallies.

Amende honorable is a term alſo uſed for making recantation in open court, or in preſence of the perſon injured.

AMENDMENT, in law, the correction of an error committed in a proceſs, which may be amended after judgment, unleſs the error lies in giving judgment, for in that caſe it is not amendable, but the party muſt bring a writ of error.

A bill may be amended on the file at any time before the plea is pleaded; but not afterwards, without motion and leave of the court.

AMENDMENT, in a literary ſenſe, denotes the correction of ſome impropriety in the firſt impreſſions of a book.

AMENDMENT *of a bill*, in parliament, is ſome alteration made in the firſt draught of it. We even read of amendments of amendments. However, it is to be obſerved, that all amendments are made in the houſe, from whence the thing to be amended originally proceeded.

AMENTACEOUS, in botany, an appellation given to ſuch flowers as have an aggregate of ſummits hanging down in form of a rope, or cats-tail, which is alſo called an julus or catkin. See plate XV. fig. 4.

AMENTUM, in roman antiquity, a thong tied about the middle of a javelin or dart, and faſtened to the fore-finger in order to recover the weapon as ſoon as it was diſcharged. The antients made great uſe of the amentum, thinking it helped to inforce the blow.

Amentum alſo denotes a latchet that bound their ſandals.

AMERCE-

Fig. 1. AMARANTH.



Fig. 2. AMARANTHOIDES.



Fig. 3. AMBROSIA.

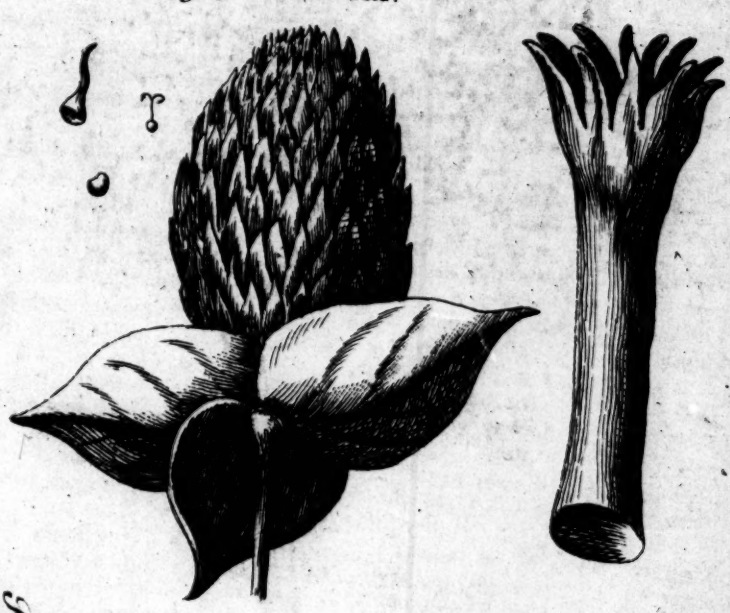


Fig. 4. AMENTACEOUS.



Fig. 5. AMMI.



T. Jefferys sculp.

BRITISH MUSEUM

AMERCEMENT, or AMERCIAMENT, in law, a pecuniary puniſhment impoſed upon offenders at the mercy of the court.

Amercements differ from fines, the latter being certain puniſhments growing expreſsly from ſome ſtatute, whereas the former are impoſed arbitrarily in proportion to the fault.

Beſides, fines are aſſeſſed by the court, but amercements by the country.

A court of record only can fine, all others can only amerce.

Sheriffs are amerciable for the faults of their officers, and clerks of the peace may be amerced in the King's-bench for groſs faults in indictments removed to that court.

A town is ſubject to amercement for the eſcape of a murderer in the day-time, and if the town is walled, it is ſubject to amercement whether the eſcape happens by day or night.

The ſtatute of Magna Charta ordains, that a freeman is not to be amerced for a ſmall fault, but in proportion to the offence, by his peers and equals.

AMERICA, one of the four grand diviſions of the earth, otherwiſe called the Weſt-Indies, is a vaſt continent lying between 80° north latitude; and 58° ſouth latitude, and between 35°. and 145°. weſt longitude, bounded by the Atlantic ocean, which ſeparates it from Europe and Africa on the eaſt, and by the Pacific ocean, uſually called the South ſea, which divides it from Aſia, on the weſt.

This vaſt continent is divided into two peninſulas, called North and South America, and ſeparated from each other by the iſthmus of Panama.

America, ſometimes called the new world, as being unknown to the antients, is poſſeſſed at preſent by the european nations.

To Spain belong old and new Mexico, Florida, Terra Firma, Peru, Chili, Patagonia, or Terra Magellanica, Paragua, and the iſlands Cuba, Hiſpaniola, Porto-Rico, and Trinidad. The Portugueſe are maſters of the extenſive maritime country of Brazil. The Britiſh poſſeſs the provinces of Georgia, ſouth and north Carolina, Virginia, Maryland, Penſilvania, the two Jerſeys, New York, New England, New Scotland, New Britain, and the iſlands Jamaica, Barbadoes, St. Chriſtophers, Newfoundland, &c. and laſtly, Hudſon's-bay, or Britiſh Canada.

The French claim all that extent of country, lying weſtward of the britiſh plantations, and are in poſſeſſion of the iſlands of Caen, Martinico, Guadaloupe, &c

The Dutch are poſſeſſed of Surinam, and of ſome iſlands on the north coaſt of Terra Firma, as Curaſſow, Aruba, Bonaire, &c. And to Denmark belongs the iſland of St. Thomas. See the articles MEXICO, FLORIDA, &c.

Such, at leaſt, were the partitions of this vaſt continent, as they ſtood before the breaking out of the preſent war, in the year 1756; during which France loſt alloſt all her american ſettlements.

AMERSHAM, a market-town of Buckinghamſhire, about twenty-ſeven miles weſtward of London.

It is ſituated in 40′ weſt longitude, and 51°. 40′, north latitude, and ſends two members to parliament.

AMETHYST, *amethyſtus*, in the hiſtory of precious ſtones, a gem of a purple colour, which ſeems compoſed of a ſtrong blue and a deep red: and according as either of thoſe prevails, affording different tinges of purple, ſometimes approaching to violet, and ſometimes even fading to a pale roſe-colour.

Though the amethyſt be generally of a purple-colour, it is nevertheleſs ſometimes found naturally colourleſs, and may at any time be eaſily made ſo by putting it into the fire; in which pellucid, or colourleſs ſtate, it ſo well imitates the diamond, that its want of hardneſs ſeems the only way of diſtinguiſhing it.

Some derive the name amethyſt from its colour, which reſembles wine mixed with water: whilſt others, with more probability, think it got its name from its ſuppoſed virtue of preventing drunkenneſs; an opinion, which, however imaginary, prevailed to that degree among the antients, that it was uſual for great drinkers to wear it about their necks.

Be this as it will, the amethyſt is ſcarce inferior to any of the gems in the beauty of its colour; and in its pureſt ſtate is of the ſame hardneſs, and at leaſt of equal value with the ruby and ſapphire.

It is found of various ſizes, from the bigneſs of a ſmall vetch, to an inch and an half in diameter, and often to much more than that in length. Its ſhape is extremely various, ſometimes roundiſh, ſometimes oblong, and at others flatted, at leaſt on one ſide; but its moſt common appearance is in a cryſtalliform figure, conſiſting of a thick column, compoſed of four planes, and terminated by a flat and ſhort pyramid, of the ſame number

of ſides; or elſe, of a thinner and longer hexangular column; and ſometimes of a long pyramid without any column. It makes the gayeſt figure in the laſt of theſe ſtates, but is hardeſt and moſt valuable in the roundiſh and pebble-like form.

The amethyſt is found in the Eaſt and Weſt-Indies, and in ſeveral parts of Europe; the oriental ones, at leaſt ſome of the finer ſpecimens, being ſo hard and bright, as to equal any of the coloured gems in value. However, by far the greater number of amethyſts fall infinitely ſhort of theſe, as all the european ones, and not a few of thoſe brought from the Eaſt and Weſt-Indies, are very little harder than common cryſtal.

Counterfeit or factitious AMETHYST, a kind of glaſs made of cryſtal-frit, manganeſe, and zaffer; which, in colour, greatly reſembles the natural amethyſt.

The method of giving this colour to glaſs is as follows. Take cryſtal-frit, made with the moſt perfect and fine tarſo; then prepare a mixture of manganeſe in powder, one pound; zaffer prepared, one ounce and half; mix theſe powders well together, and add to every pound of the frit, an ounce of this powder. Let it be put into the pots with the frit, not into the already made metal. When the whole has ſtood long enough in fuſion to be perfectly pure, work it into veſſels, and they will reſemble the colour of the amethyſt.

AMETHYST, in heraldry, a term for the purple colour in the coat of a nobleman, in uſe with thoſe who blazon by precious ſtones inſtead of metals and colours. This in a gentleman's eſcutcheon is called Purpure, and in thoſe of ſovereign princes Mercury.

AMHAR, or AMHARA, a kingdom of Abyſſinia in Africa, ſubject to the great Negus. It is bounded on the north by the kingdom of Bajemder; on the eaſt, by that of Angote; on the ſouth, by the kingdom of Walaca; and on the weſt, by the Nile, which ſeparates it from the kingdom of Gojam. This country is remarkable for the mountains Gheſghen and Ambacel, where the children and near relations of the kings of Abyſſinia were formerly confined, upon which account it is regarded as the native country of the modern emperors.

AMIA, in ichthyology, the name of a fiſh nearly of the ſhape of the common mackrel, only that it is much larger; being uſually three feet in length. It is a ſpecies of ſcomber, with the laſt ray of the hinder dorſal fin very long. See the article SCOMBER.

AMIABLE, or AMICABLE *numbers*, ſuch as are mutually equal to the ſum of one another's aliquot parts, as the numbers 284 and 220.

Van Schouten was the firſt who gave this name to ſuch numbers, of which it is eaſily apprehended, there are but very few at leaſt to be ſet down and manageable by us. For 284 and 220 are the two leaſt, and the two next greater are 18416 and 17296.

AMIANTHUS, in natural hiſtory, vulgarly called earth-lax, a fibroſe, flexile, and elaſtic mineral ſubſtance, compoſed of ſhort and abrupt filaments; being a genus of that order of foſſils called aſbeſti. See the article ASBESTUS.

There are ſeveral ſpecies of amianthi; that of a greyiſh green colour, with ſhort, abrupt, and interwoven filaments, is the ſame with the plumoſe alum of the ſhops. See the article *Plumoſe* ALUM.

The properties of the amianthus are very wonderful. They will neither give fire with ſteel, nor ferment with aqua fortis; and if thrown into the fire, will endure the moſt extreme heat without the leaſt injury to their texture. In medicine, they are uſed as an ingredient in pſilothra, and are ſaid to reſiſt poiſons, and to cure the itch.

AMICABLE, in a general ſenſe, denotes any thing done in a friendly manner, or to promote peace.

AMICABLE BENCHES, *ſcamna amicabilia*, in roman antiquity, were, according to Pitiſcus, lower and leſs honourable ſeats allotted for the *judices pedanei*, or inferior judges, who upon being admitted of the emperor's council, were dignified by him with the title *amici*.

AMICTUS, in roman antiquity, was any upper garment worn over the tunica.

AMICTUS, among eccleſiaſtical writers, the uppermoſt garment antiently worn by the clergy; the other five being the alba, ſingulum, ſtola, manipulus, and planeta.

The amictus was a linen garment, of a ſquare figure, covering the head, neck, and ſhoulders, and buckled, or claſped, before the breaſt. It is ſtill worn by the religious abroad.

AMICULUM, in roman antiquity, a woman's upper garment, which differed from the palla, as we learn from Livy; but in what

what that difference conſiſted, we are at a loſs to know, unleſs that it was ſhorter than the palla.

The amiculum was worn both by matrons and courtezans.

The amiculum worn by men reſembled the chlamys or paludamentum.

AMIENS, the capital city of Picardy in France, ſituated on the river Somme, in eaſt longitude 2° 30′. and north latitude 49° 50′.

Amiens is a beautiful town, and a biſhop's ſee, under the archbiſhop of Rheims. Here too is an univerſity of conſiderable note.

AMITTERE LEGEM TERRÆ, among lawyers, a phraſe importing the loſs of liberty of ſwearing in any court. The puniſhment of a champion overcome or yielding in battle, of jurors found guilty in a writ of attaint, and of a perſon outlawed.

AMMANNIA, in botany, the name of a genus of plants, belonging to the *tetrandria monogynia* claſs of Linnæus; the flower of which is compoſed of four oval patent petals, growing within the cup; and its fruit is a roundiſh capſule covered by the cup, and containing four cells: the ſeeds are numerous and ſmall.

AMMI, BISHOP'S WEED, in botany, a diſtinct genus of umbelliferous plants, belonging to the *pentandria digynia* claſs of Linnæus; the flower of which is roſaceous, and compoſed of heart-like petals; and its fruit is a ſmall roundiſh and ſtriated capſule, containing two ſtriated ſeeds, convex on one ſide, and plane on the other. See plate XV. fig. 5.

The ſeeds of this plant are reputed aromatic, aperitive, carminative, and alexipharmic; being one of the leſſer hot ſeeds of the ſhops, and recommended in hyſteric complaints, as well as to expel wind, and to promote the menſes.

AMMODYTES, the SAND-EEL, or GRIG, in ichthyology, a genus of malacopterygeous fiſhes. The characters of this genus of fiſhes are as follow: the body is oblong and ſlender, and is of a rounded but ſomewhat depreſſed figure; there are no belly-fins, the head is of a depreſſed form, and the branchioſtege membrane on each ſide contains ſeven bones, but they are in great part covered by the opercula of the gills. The head of the ammodytes is ſmall, much narrower than the body, of a compreſſed figure, and acute at the forepart; the lower jaw projects a great way beyond the upper; and the opening at the mouth is large; the noſtrils have each a double aperture, and ſtand in the middle between the eyes and the extremity of the roſtrum; the eyes are large, and the iris of a ſilvery colour; the ſcales are extremely ſmall on the back, and are of a greyiſh colour, and the belly is of a ſilvery-white. See plate XVI. fig. 1.

It has got the appellation ammodytes, from its diving into, or burying itſelf under the ſand.

AMMON, or HAMMON, in antiquity, an epithet given to Jupiter in Libya, where was a celebrated temple of that deity, under the denomination of Jupiter Ammon. There has been a great diſpute about the origin of this name. Some derive it from the greek *αμμος*, *ſand*, in regard the temple was ſituate in the burning ſands of Libya, others borrow it from the egyptian *anam*, a *ram*, as having been firſt diſcovered by that animal; others will have *ammon* to ſignify the *ſun*, and the horns wherewith he is repreſented, the ſun-beams.

AMMONIAC, or *Gum* AMMONIAC, in the materia medica, a gum, or more properly a gum-reſin, extracted from a ferulaceous plant growing in ſome parts of Africa and Aſia. It is brought to us in drops or granules, and ſometimes in large maſſes, compoſed of a number of theſe granules connected together by other matter of the ſame kind.

The beſt ammoniac is always freeſt from droſs, of a yellowiſh colour without and white within, of a bitteriſh taſte and caſtor ſmell.

Ammoniac is in great eſteem with modern phyſicians. It attenuates and deterges, and therefore is preſcribed in all diſtempers ariſing from grumes and viſcidities, which prevent a due motion of the nervous fluid. It is found of vaſt ſervice in aſthmas, and infarctions of the lungs, in all nervous caſes, and particularly thoſe termed hyſterical. Sometimes it is given in pills, but more uſually in an emulſion of hyſop-water, which is called lac ammoniacum. It alſo enters into the compoſition of many topics as as a ſuppurative, and is ſometimes uſed externally in plaiſters.

Sal AMMONIAC, a kind of chemical ſalt, more uſually called ſal-armoniac. See the article ARMONIAC.

AMMONITÆ, in natural hiſtory, the ſame with the cornua ammonis, or ſnake-ſtones. See CORNU AMMONIS.

AMMOSCHISTUM, in natural hiſtory, the name of a genus of foſſils, conſiſting of ſlate ſtone, compoſed only of ſparry and cryſtalline particles, or of talcy, ſparry and cryſtalline particles. See SLATE.

AMMUNITION, a general term for all warlike proviſions, but more eſpecially powder, ball, &c.

Ammunition, arms, utenſils of war, gunpowder, imported without licence from his majeſty, are, by the laws of England, forfeited and triple the value.

And again, ſuch licence obtained, except for furniſhing his majeſty's public ſtores, is to be void, and the offender to incur a præmunire, and be diſabled to hold any office from the crown.

AMMUNITION BREAD, SHOES, &c. ſuch as are ſerved out to the ſoldiers of an army or garriſon.

Whoever is curious to know the quantity of ammunition neceſſary for the ſiege of a place, may conſult the chevalier de St. Julien's treatiſe *de la forge de Vulcain*; and the quantity requiſite for the defence of a place, will be found in Suirey de St. Remy's *memoires d'artillerie*.

AMNESTY, *αμνηστια*, in matters of policy, an act by which two parties at variance, promiſe to pardon and bury in oblivion all that is paſt.

Amneſty is either general and unlimited, or particular and reſtrained, though moſt commonly univerſal, without condition or exceptions; ſuch as that which paſſed in Germany at the peace of Oſnaburg in the year 1648.

Amneſty, in a more limited ſenſe, denotes a pardon granted by a prince to his rebellious ſubjects, uſually with ſome exceptions: ſuch was that granted by Charles II. at his reſtoration.

AMNIOS, in anatomy, a thin pellucid membrane, which ſurrounds the fœtus.

The amnios is an interior membrane contiguous to the exterior one called the chorion, having no veſſels, or at the utmoſt very few; and contains a pellucid glutinous liquor which flows out upon the breaking of this membrane at the time of delivery.

With regard to the liquor incloſed in the amnios, the famous Harvey thought it abſolutely nutritious both from its taſte and conſiſtence, but later anatomiſts have diſproved that doctrine, and have ſhewn that the uſe of that liquor is to prevent the weight of the child, and the inequalities of its body from bearing hard upon the neck of the uterus; to defend the child from receiving hurt when it moves, and alſo to prevent it from adhering to the uterus.

AMOEBÆUM, *αμοιβαιον*, in antient poetry, a kind of poem, repreſenting a diſpute between two perſons, who are made to anſwer each other alternately: ſuch are the third and ſeventh of Virgil's eclogues.

AMOMUM, in the materia medica, the name of a ſpecies of ſium, an aromatic plant, the ſeed whereof is a powerful diuretic, and aperient; and, conſequently, eſteemed good in nephritic caſes, obſtructions of the viſcera, and ſuppreſſion of the menſes. See the article SIUM.

As to the amomum of the antients, it is a congeries of round membranaceous fruits the external coats of which are ſtriated like thoſe of the cardamoms, but not tough like them. They have no pedicle, but are affixed by their baſis to a wooden ſtem of a fibrous texture, aromatic ſmell, and acrid taſte. The flowers are like thoſe of leucovium, and the leaves like thoſe of briony.

The beſt amomum is that which is white or reddiſh, of a diffuſed ſubſtance, with pods full of ſeed, ponderous and fragrant.

AMOMUM, in botany, a genus of the *monandria monogynia* claſs of plants, the corolla whereof is monopetalous, conſiſting of a ſhort tube, and a limb divided into three oblong ſegments, the middle ſegment is larger than the reſt, and the ſinus oppoſite to it more open; the nectarium is monophyllous, and inſerted into the large ſinus juſt mentioned; it ſcarce at all appears above the ſegments of the corolla; the fruit is coriaceous, of an oval figure, but ſomewhat three cornered, it is compoſed of three valves forming as many cells; the ſeeds are numerous and ſmall. The amomum comprehends the plant called zinziber by authors; for the uſes and characters whereof, ſee the articles GINGER and ZINZIBER.

AMORBACH, a ſmall city of Franconia in Germany, belonging to the elector of Mentz.

AMORE, in ichthyology, the name of a genus of braſilian fiſhes, of which there are three ſpecies. 1. The amore-guacu. 2. amore-tinga. 3. amore-pixuma.

The amore-guacu is about half a foot long, with a pretty thick head, and large gills. It has ſeven fins, an oblong tail rounded at the extremity, and is covered with very large ſcales. This fiſh is altogether

gether of a darkish colour, except in the belly, where it is a little more white.

The amore-tinga is of the same figure with the former, but less. Its scales are white and stained with black spots.

The amore pixuma is as large as the tamoata, and resembles that fish very much. Its colour is very dark, except in the belly.

AMORGO, an island of the archipelago, about ninety miles north of Candia, lying in east longitude 26° 15′. and north latitude 37°.

AMORPHA, in botany, a genus of plants, belonging to the *diadelphia decandria* class of Linnæus; the flower of which consists of one petal vertically ovated, hollow and erect; and the fruit is a lunulated pod, of a compressed form, and covered with tubercles, in which are contained two seeds, of an oblong kidney-like shape.

AMORTIZATION, in law, the alienation of lands or tenements to a corporation or fraternity, and their successors. See the article MORTMAIN.

Amortization also denotes the privilege of taking lands, &c. in mortmain, for which purpose the king's consent must first be obtained. This licence is granted upon paying to the king and the superior a certain sum to indemnify them for several incidental dues, which in the common way would have fallen to them, but by the amortization are cut off.

AMOS, or *the prophecy of* AMOS, a canonical book of the Old Testament. This prophet boldly remonstrates against the crying sins that prevailed among the Israelites, such as idolatry, oppression, wantonness and obstinacy, and reproves the people of Judah for their carnal security, sensuality and injustice. He terrifies them both with frequent threatnings, and pronounces that their sins will at last end in the ruin of Judah and Israel, which he illustrates by the visions of a plumb line and a basket of summer-fruits. He begins with denunciations of judgment and destruction against the enemies of the Jews, and concludes with promises of restoring the tabernacle of David, and erecting the kingdom of Christ.

AMOVING, the act of expelling a person from his place or office. There is a statute for amoving papists from London and Westminster, and ten miles round them.

AMOUR, a large river of Asia, which, arising in Siberia, runs eastward through Chinese Tartary, and falls into the bay of Corea in the indian ocean.

AMOY, an island on the south-west coast of China, situated in east longitude 118°. north latitude 25°.

AMPELIS, in zoology, a species of passares, of a chesnut-brown colour with a ferruginous breast. This bird has a head of a pale chesnut colour on the forepart, but of a deeper brown behind, short but well feathered wings, a tail moderately long, and slender legs of a bluish black colour. It is a native of Bohemia.

AMPELITES, CANNEL-COAL, in natural history, a solid, dry, opake fossil, very hard, not fusible, but easily inflammable and burning with a bright, vivid, white flame. It is found in many parts of England, but particularly in a quarry near Alençon in France; it is of a very good black, though not near so deep and shining as jet, and in the thinnest pieces, has not the least transparence.

It makes no effervescence with aqua fortis. It dies the hair black: being applied to the belly, it is reputed good for killing of worms. It is capable likewise of a fine polish, and for that reason is turned into a vast number of toys, as snuff-boxes, and the like.

Ampelites is by some called vine-earth, because it kills the worms that creep upon the vines.

AMPHIARTHROSIS, ἀμφιαρθρωσις, in anatomy, a term under which some moderns comprehend all those junctures of the bones, which have a manifest motion, and which differ from the several articulations of the diarthrosis either in regard to their figure or motion. See the article DIARTHROSIS.

AMPHIBIOUS, among zoologists, an appellation given to a class of animals, which live part of their time in the water, and part of it on land.

The distinguishing characters of this class, according to Linnæus, are these: they have either naked or scaly bodies, and sharp-pointed fore-teeth, but without any grinders, or *dentes molares*: to which add, that they have no radiated fins.

To this class belong the tortoise, the frog-kind, and the lizard and serpent-kinds. See the article TORTOISE, &c.

Anatomists observe, that the lungs of amphibious animals are so formed, that though respiration be necessary to them, yet it is not requisite to be performed at short

ſhort intervals. Hence it is, that they can remain a long time under water without being ſuffocated, and many of them, even a conſiderable part of their lives.

AMPHIBIOUS, in botany, a term ſometimes applied to the plants, more uſually called aquatic. See AQUATIC.

AMPHIBLESTROIDES, in anatomy, a name by which ſome call the retina of the eye. See RETINA.

AMPHIBOLIA. See the next article.

AMPHIBOLOGY, *αμφιβολογια*, in grammar and rhetoric, a term uſed to denote a phraſe ſuſceptible of two different interpretations.

Amphibology ariſes from the order of the phraſe, rather than from the ambiguous meaning of a word.

Voſſius rather chuſes to call this defect of language, amphibolia.

AMPHIBRACHYS, in antient poetry, the name of a foot conſiſting of three ſyllables, whereof that in the middle is long, and the other two ſhort: ſuch is the word ăbīrĕ.

AMPHICTYONS, *αμφικτυονες*, in grecian antiquity, an aſſembly compoſed of deputies from the different ſtates of Greece, and reſembling, in ſome meaſure, the diet of the german empire. See DIET.

Some ſuppoſe the word *Αμφικτυονι* to be formed of *αμφι*, about, and *κλιειν*, or *κλιζειν*, in regard the inhabitants of the country round about met here in council. Others, with more probability, from Amphictyon, ſon of Deucalion, whom they ſuppoſe to have been the founder of this aſſembly; though others will have Acriſius, king of the Argives, to have been the firſt who gave a form and laws to this body.

The amphictyons met regularly at Delphi, twice a year, viz. in ſpring and autumn; and decided all differences between any of the grecian ſtates, their determinations being held ſacred and inviolable.

Authors give different accounts of the number of the Amphictyons, as well as of the ſtates who were entitled to have their repreſentatives in this council; according to Strabo, Harpocration, and Suidas, they were twelve from their firſt inſtitution ſent by the following cities, and ſtates; the Ionians, Dorians, Perrhæbians, Bœotians, Magneſians, Achæans, Phthians, Melians, Dolopians, Ænianians, Delphians, and Phocæans. Æſchines only reckons eleven, inſtead of the Achæans, Ænianians, Delphians, and Dolopians, he only gives theſe three, the Theſſalians, Ætæans, and Locrians; and Pauſanias no more than ten.

In the time of Philip of Macedon, the Phocæans were excluded the alliance, for having plundered the Delphian temple, and the Lacedæmonians were admitted in their place; but the Phocæans ſixty years after, having behaved gallantly againſt Brennus and his Gauls, were reſtored to their ſeat in the Amphictyonic council. Under Auguſtus, the city Nicopolis was admitted into the body; and to make room for it, the Magneſians, Melians, Phthians, and Ænianians, who till then had diſtinct voices, were ordered to be numbered with the Theſſalians, and to have only one common repreſentative. Strabo ſpeaks as if this council were extinct in the times of Auguſtus and Tiberius; but Pauſanias who lived many years after, under Antoninus Pius, aſſures us it remained intire in his time, and that the number of Amphictyons was then thirty.

The members were of two kinds; each city ſending two deputies, under different denominations, one called *Ιερομνημων*, whoſe buſineſs ſeems to have been more immediately to inſpect what related to ſacrifices and ceremonies of religion; the other *Πυλαγορας*, charged with hearing and deciding of cauſes and differences between private perſons. Both had an equal right to deliberate and vote, in all that related to the common intereſts of Greece. The Hieromnemon was elected by lot; the Pylagoras, by plurality of voices.

AMPHIDROMIA, *αμφιδρομια*, in antiquity, conſtituted part of the luſtration of infants. See LUSTRATION.

AMPHIMACER, in ancient poetry, a foot conſiſting of three ſyllables, whereof the firſt and laſt are long, and that in the middle ſhort: ſuch is the word cāſtĭtās.

AMPHIPOLES, in antiquity, the principal magiſtrates of the city of Syracuſe, in Sicily, called archons at Athens. See the article ARCHON.

AMPHIPOLIS, or STRYMON, a town of european Turkey, once the capital of Macedonia, ſituated in eaſt longitude 40° 5′, and north latitude 41° 30′.

AMPHIPPII, in grecian antiquity, ſoldiers, who, in war, uſed two horſes without ſaddles, and were dextrous enough to leap from one to the other.

Authors

BRITISH MUSEUM

ſhort intervals. Hence it is, that they can remain a long time under water without being ſuffocated, and many of them, even a conſiderable part of their lives.

AMPHIBIOUS, in botany, a term ſometimes applied to the plants, more uſually called aquatic. See AQUATIC.

AMPHIBLESTROIDES, in anatomy, a name by which ſome call the retina of the eye. See RETINA.

AMPHIBOLIA. See the next article.

AMPHIBOLOGY, *αμφιβολόγια*, in grammar and rhetoric, a term uſed to denote a phraſe ſuſceptible of two different interpretations.

Amphibology ariſes from the order of the phraſe, rather than from the ambiguous meaning of a word.

Voſſius rather chuſes to call this defect of language, amphibolia.

AMPHIBRACHYS, in antient poetry, the name of a foot conſiſting of three ſyllables, whereof that in the middle is long, and the other two ſhort: ſuch is the word ăbīrĕ.

AMPHICTYONS, *αμφικτυονες*, in grecian antiquity, an aſſembly compoſed of deputies from the different ſtates of Greece, and reſembling, in ſome meaſure, the diet of the german empire. See DIET.

Some ſuppoſe the word Αμφικτυονες to be formed of *αμφι*, about, and *κτιειν*, or *κτιζειν*, in regard the inhabitants of the country round about met here in council. Others, with more probability, from Amphictyon, ſon of Deucalion, whom they ſuppoſe to have been the founder of this aſſembly; though others will have Acriſius, king of the Argives, to have been the firſt who gave a form and laws to this body.

The amphictyons met regularly at Delphi, twice a year, viz. in ſpring and autumn; and decided all differences between any of the grecian ſtates, their determinations being held ſacred and inviolable.

Authors give different accounts of the number of the Amphictyons, as well as of the ſtates who were entitled to have their repreſentatives in this council; according to Strabo, Harpocration, and Suidas, they were twelve from their firſt inſtitution ſent by the following cities, and ſtates; the Ionians, Dorians, Perrhæbians, Bœotians, Magneſians, Achæans, Phthians, Melians, Dolopians, Ænianians, Delphians, and Phocæans. Æſchines only reckons eleven, inſtead of the Achæans, Ænianians, Delphians, and Dolopians, he only gives theſe three, the Theſſalians, Ætæans, and Locrians; and Pauſanias no more than ten.

In the time of Philip of Macedon, the Phocæans were excluded the alliance, for having plundered the Delphian temple, and the Lacedæmonians were admitted in their place; but the Phocæans ſixty years after, having behaved gallantly againſt Brennus and his Gauls, were reſtored to their ſeat in the Amphictyonic council. Under Auguſtus, the city Nicopolis was admitted into the body; and to make room for it, the Magneſians, Melians, Phthians, and Ænianians, who till then had diſtinct voices, were ordered to be numbered with the Theſſalians, and to have only one common repreſentative. Strabo ſpeaks as if this council were extinct in the times of Auguſtus and Tiberius; but Pauſanias who lived many years after, under Antoninus Pius, aſſures us it remained intire in his time, and that the number of Amphictyons was then thirty.

The members were of two kinds; each city ſending two deputies, under different denominations, one called Ἱερομνημων, whoſe buſineſs ſeems to have been more immediately to inſpect what related to ſacrifices and ceremonies of religion; the other Πυλαγορας, charged with hearing and deciding of cauſes and differences between private perſons. Both had an equal right to deliberate and vote, in all that related to the common intereſts of Greece. The Hieromnemon was elected by lot; the Pylagoras, by plurality of voices.

AMPHIDROMIA, *αμφιδρομια*, in antiquity, conſtituted part of the luſtration of infants. See LUSTRATION.

AMPHIMACER, in ancient poetry, a foot conſiſting of three ſyllables, whereof the firſt and laſt are long, and that in the middle ſhort: ſuch is the word cāſtĭtās.

AMPHIPOLES, in antiquity, the principal magiſtrates of the city of Syracuſe, in Sicily, called archons at Athens. See the article ARCHON.

AMPHIPOLIS, or STRYMON, a town of european Turkey, once the capital of Macedonia, ſituated in eaſt longitude 40° 5′. and north latitude 41° 30′.

AMPHIPPII, in grecian antiquity, ſoldiers, who, in war, uſed two horſes without ſaddles, and were dextrous enough to leap from one to the other.

Authors

BRITISH MUSEUM

Fig. 1. AMMODYTES, the *SAND-EEL.*



Fig. 2. AMPHISBENA.





Fig. 3. AMPHITRITE.



Fig. 4. AMYGDALUS, *ALMOND-TREE.*





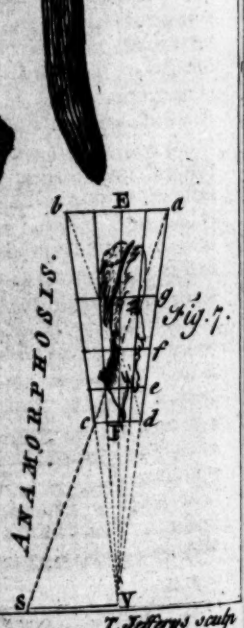
Fig. 5. ANAGALLIS.



Fig. 6.



Fig. 7.



T. Jefferys sculp

Authors are not agreed, whether theſe horſes were yoked together or not.

AMPHIPRORÆ, in the naval affairs of the antients, veſſels with a prow at each end.

They were uſed chiefly in rapid rivers, and narrow channels, where it was not eaſy to tack about.

AMPHIPROSTYLE, in the architecture of the antients, a temple which had four columns in the front, and as many in the face behind.

AMPHISBÆNA, in zoology, a kind of ſerpent ſo called, becauſe it moves with either end forward. It is a native of warm climates. See plate XVI. fig. 2.

The body of the amphiſbæna, has a number of circular annuli, ſurrounding it from the head to the extremity of the tail; ſo that it ſeems compoſed of a number of narrow and ſomewhat rounded rings applied cloſe to one another, and having deep furrows between them.

Of the amphiſbæna there are ſeveral ſpecies: whereof the fleſh, liver, and heart, are proper to excite ſweat, and reputed an antidote againſt poiſon.

AMPHISCII, among geographers, a name applied to the people who inhabit the torrid zone.

Amphiſcii, as the word imports, have their ſhadows one part of the year towards the north, and at the other towards the ſouth, according to the ſun's place in the ecliptic. They are alſo called Aſcii. See the article ASCII.

AMPHITHEATRE, in antiquity, a ſpacious edifice, built either round or oval, with a number of riſing ſeats, upon which the people uſed to ſit and behold the combats of gladiators, of wild beaſts, and other ſports.

Amphitheatres were at firſt only of wood, and it was not till the reign of Auguſtus, that Statilius Taurus built one for the firſt time of ſtone. The loweſt part was of an oval figure, and called arena, becauſe, for the conveniency of the combatants, it was uſually ſtrewed with ſand, and round the arena were vaults ſtiled *caveæ*, in which were confined the wild beaſts appointed for the ſhews.

Above the caveæ was erected a large circular periſtyle, *podium*, adorned with columns. This was the place of the emperors, ſenators, and other perſons of diſtinction.

The rows of benches were above the podium. Their figure was circular, and they were entered by avenues, at the end of which were gates, called vomitoriæ.

The moſt perfect remains we now have of antient amphitheatres, are that of Veſpaſian, called the coliſeum, that at Verona in Italy, and that at Niſmes in Languedoc. See COLISEUM.

AMPHITHEATRE, in gardening, a temple of view, erected on a riſing ground, of a ſemicircular figure.

Theſe amphitheatres are formed of evergreens, obſerving always to plant the ſhorteſt growing trees in the front, and the talleſt trees behind.

They are alſo made of ſlopes on the ſides of hills, and covered with turf, being formerly eſteemed great ornaments in gardens, but they are now generally excluded; as the natural ſlope of ſuch hills is to perſons of true taſte, far more beautiful than the ſtiff angular ſlopes of theſe amphitheatres.

AMPHITRITE, in zoology, the name of a ſmall naked ſea inſect, of an oblong figure, with only one tentaculum, reſembling a piece of thread.

There are ſeveral ſpecies of this animal, ſome of which are marginated, and variouſly furrowed, ſo as to bear ſome reſemblance to a quill. See plate XVI. fig. 3. N°. 1 and 2.

AMPHORA, in antiquity, a liquid meaſure, in uſe among the Greeks and Romans. See the article MEASURE.

The roman amphora contained forty-eight ſextaries, and was equal to about ſeven gallons one pint, engliſh wine-meaſure; and the grecian, or attic amphora, contained one third more.

Amphora, was alſo a dry meaſure, likewiſe in uſe among the Romans, and contained three buſhels.

AMPHORA, among the Venetians, the largeſt meaſure uſed for liquids. It contains four bigorzas, the bigorza being four quarts, the quart four ſachies, and each ſachie four leras; but by wholeſale, the amphora is fourteen quarts, and the bigorza three quarts and a half.

AMPHORA, in aſtronomy, a name ſometimes uſed for one of the twelve ſigns of the zodiac, more uſually called aquarius. See the article AQUARIUS.

AMPHOTIDES, in antiquity, a kind of armour or covering for the ears, worn by the antient pugiles, to prevent their adverſaries from laying hold of this part.

AMPLIATION, in roman antiquity, was the deferring to paſs ſentence in certain cauſes. This the judge did, by pronouncing the word *amplius*; or by writing the

the letters N. L. for *non liquet*; thereby ſignifying, that as the cauſe was not clear, it would be neceſſary to bring farther evidence.

AMPLIFICATION, in rhetoric. See the article EXAGGERATION.

AMPLITUDE, in aſtronomy, an arch of the horizon intercepted between the eaſt or weſt point thereof, and the center of the ſun, ſtar, or planet, at its riſing and ſetting, and ſo is either north or ſouth.

If the amplitude be taken from the riſing ſun, or ſtar, it is called its riſing or ortive amplitude; if when it ſets, its ſetting or occaſive amplitude. The ſun's amplitude, either riſing or ſetting, is found by the globes, by bringing the ſun's place to the horizon, either on the eaſt or weſt ſide, and the degrees from the eaſt point, either north or ſouth, are the amplitude required. To find the amplitude trigonometrically, ſay, as the coſine of the latitude : radius : : ſine of the preſent declination : ſine of the amplitude. This problem is uſeful in navigation, to find the variation of the compaſs.

Magnetical AMPLITUDE, the different riſing or ſetting of the ſun, from the eaſt or weſt points of the compaſs. It is found by obſerving the ſun, at his riſing and ſetting, by an amplitude-compaſs.

AMPLITUDE *of the range of a projectile*, the horizontal line, ſubtending the path in which the projectile moved. See the article PROJECTILE.

AMPULLA, in antiquity, a round big-bellied veſſel, which the antients uſed in their baths, to contain oil for anointing their bodies.

Ampulla was alſo a cup made of glaſs, and ſometimes of leather, for drinking out of at table.

AMPURIAS, a town of Spain, capital of the diſtrict of Ampourdan in Catalonia, and ſituated in eaſt longitude 2° 50′ and north latitude 42° 25′.

AMPUTATION, in ſurgery, the cutting off a limb, or other part of the body, with an inſtrument.

Tho' the amputation of limbs is as much as poſſible to be avoided, yet in many caſes it is abſolutely neceſſary to ſave the patient's life. Such as, 1. When the muſcles of the part, or limb, are ſphacelated. 2. When the muſcles and bones are violently contuſed and ſhattered. 3. When there is an incurable caries, or ſpina ventoſa. 4. When a large artery is either totally divided, or ſo wounded, that the hæmorrhage is not to be ſtopped without the danger of mortification.

When it is required on account of either of theſe cauſes to amputate a limb, the arm for example; two things muſt be obſerved: 1. The place where the amputation is to be made, which ſhould be one or two fingers breadth above the injured part, and never in it. 2. The preparation of the ſeveral neceſſary inſtruments. The whole apparatus being provided, the patient, aſſiſtants, and ſurgeon being diſpoſed in proper poſtures, and the tournequet applied to the arm, the operation is begun by an annular inciſion made through the ſkin with a ſcalpel, upon which the ſkin is drawn upwards as much as poſſible. Then the fleſh is divided down to the bones with the crooked ſcalpel, the ligaments between the ulna and radius are cut, and the periofteum are ſeparated from the bones. The laſt ſtep is to fix the ſaw ſo as that it may work upon the bones of the cubitus at the ſame time. It muſt alſo be moved gently at the beginning, but when well entered, the motion may be faſter. And thus in one or two minutes, the amputation may be completed. See the article SAW.

The buſineſs, however, of the ſurgeon is not at an end here. He is to make a ſtrict compreſſure and deligation upon the larger arteries, to ſuppreſs the hæmorrhage. This is done, by ſecuring the larger arteries by ligature with needle and thread, and the ſmaller by ſquare compreſſes of linen, and ſometimes, as among the ancients, by the actual cautery. The fleſh and ends of the bones, likewiſe, are to be inveſted with doſſils of dry lint, over which a piece of the fungus called crepitus lupi, with a bolſter of tow, are to be fixed and retained on the ſtump by a wet bladder or plaiſter; ſo that the ſkin may be drawn down to cover the wound, and procure a ſpeedy cicatriſation. See the article WOUND.

AMSDORFIANS, in church-hiſtory, a ſect of proteſtants, in the XVIth century, who took their name from Amſdorf, their leader.

They maintained, that good works were not only unprofitable, but even oppoſite and pernicious to ſalvation.

AMSTERDAM, a large and beautiful city of Holland, ſituated on the river Amſtel, and an arm of the ſea, called Wye, a little eaſtward of the Zuyder-ſea, in

in 4° 30′ east longitude, and 52° 20′ north latitude.

It is computed to be half as big as London; and, in point of trade, equal to any town of the known world; there being people in it of almost every nation and religion in Europe, who apply themselves, with the utmost diligence, to heap up wealth, not with a view to enjoy it, but to have the pleasure of dying rich.

AMSTERDAM is also the name of a town of the Curacoes, in America: likewise the name of three islands, one of which lies in the indian ocean, between New Holland and Madagascar; the second between Peru and the islands of Solomon; and the third in the chinese sea, between Japan and the island of Formosa.

AMULET, a charm, or preservative against mischief, witchcraft, or diseases.

Amulets were made of stone, metal, simples, animals, and, in a word, of every thing which fancy or caprice suggested; and sometimes they consisted of words, characters, and sentences, ranged in a particular order, and engraved upon wood, *&c.* and worn about the neck, or some other part of the body. See the article ABRACADABRA.

At other times they were neither written nor engraved, but prepared with many superstitious ceremonies, great regard being usually paid to the influence of the stars. The Arabians have given to this species of amulet the name of talisman. See the article TALISMANS.

All nations have been fond of amulets; the Jews were extreamly superstitious in the use of them, to drive away diseases: and the Misna forbids them, unless received from an approved man, who had cured at least three persons before, by the same means.

Even amongst the christians of the early times, amulets were made of the wood of the cross, or ribbands with a text of scripture written in them, as preservatives against diseases; and therefore the council of Laodicea forbids ecclesiastics to make such amulets, and orders all such as wore them to be cast out of the church.

AMURCA, among antient physicians, a medicine prepared by boiling the recrements or fæces of oil olives to the consistence of honey; of some use as an astringent and drier.

Amurca is also an appellation used by some writers for the fluid found in the *venes succenturiati*. See the article SUCCENTURIATI.

AMY, in law, the next friend or relation to be intrusted for an infant. See the article PROCHEIN.

Alien amy signifies a foreigner here, subject to some foreign prince, or power, in friendship with us.

AMYGDALA, in botany, the fruit of the amygdalus, or almond tree. See the article ALMOND-TREE.

AMYGDALÆ, *almonds*, in anatomy. See the article ALMONDS.

AMYGDALUS, the almond tree, in botany, a genus of trees, for the description and uses of which, see the article ALMOND-TREE, and plate XVI. fig. 4.

AMYLON, or AMYLUM, a term given to starch. See the article STARCH.

It is used in the materia medica amongst astringents and agglutinants.

Amylum, in a general sense, is used by Castellus to signify any sort of chymical fæculæ.

AMYTHAONIS *emplastrum*, among antient physicians, a plaster for convulsions, and distortions of the joints. It was made of gum ammoniac, wax, bdellium, each eight drams; of turpentine, illyrian orrice, galbanum, each twenty drams.

AMZEL, in ornithology, the english name of two species of merulæ, or blackbirds. See the article MERULÆ.

AN JOUR *and* WASTE, in law, signifies a forfeiture of lands for a year and a day, to the king, by persons committing petit treason and felony, and afterwards the land falls to the lord.

ANA, among physicians, denotes an equal quantity of the ingredients which immediately precede it in prescriptions: it is written by abbreviation ā or ā ā; thus, ℞ *thur. myrrh. alum.* ā ā, i ℈: that is, take frankincense, myrrh, and alum, each a scruple.

ANA, in matters of literature, a latin termination added to the titles of several books in other languages.

They are collections of the conversation and memorable sayings of men of wit and learning; the Scaligeriana was the first book that appeared with a title in *ana*, and was afterwards followed by the Perroniana, Thuana, Naudæana, Menagiana, and even by Arlequiniana, in ridicule of all books in *ana*. The Menagiana are accounted the best.

ANA, among occult philosophers, a term used to denote the human mind; from whence some will have *anasapta*, a dæmon invoked by sick persons, to be derived.

ANABAPTISTS, in church-hiſtory, a ſect of proteſtants, which ſprung up in Germany, in 1521, immediately after the riſe of lutheraniſm. At firſt, they preached up an entire freedom from all ſubjection to the civil as well as eccleſiaſtical power: but the tenet from whence they take their name, and which they ſtill maintain, is their re-baptiſing all new converts to their ſect, and condemning infant-baptiſm.

Great troubles were occaſioned in Germany by this ſect; but of all places, where they prevailed, none ſuffered ſo much by them as the town of Munſter.

The anabaptiſts, however, of Holland and Friezland diſapproved the ſeditious behaviour of their brethren of Munſter: and, at preſent, though this ſect ſtill ſubſiſts as well in Britain as abroad, yet they no longer pretend to be divinely inſpired, they no longer oppoſe magiſtrates, nor preach up a community of goods, &c.

The anabaptiſts ſupport their principal doctrine upon thoſe words of our ſaviour, *He that believeth, and is baptized, ſhall be ſaved.* Now, as adults, or grown perſons, are alone capable of believing, they argue, that none but adults are fit to be baptiſed. This doctrine is oppoſed, by alledging the contrary practice of the primitive church, as well as from ſcripture, which tells us, that children are capable of the kingdom of heaven, and at the ſame time aſſures us, that, *except a man be baptized, he cannot enter into the kingdom of God.*

As for the anabaptiſts in England, they differ in very little from the other proteſtant diſſenters, except their rejecting infant-baptiſm; as appears from their confeſſion of faith, publiſhed in 1689.

ANABASII, in antiquity, expeditious couriers, who carried meſſages of importance, and travelled either on horſeback, or in wheel-carriages. See COURIER.

They are mentioned by St. Jerome, in his third book againſt Ruffinus.

ANABASIS, among phyſicians, denotes either the increaſe or augmentation of a fever in general, or of any particular paroxyſm.

ANABASIS, in the linnæan ſyſtem of botany, a genus of the pentandria digynia claſs of plants, the calyx of which is a perianthium, conſiſting of three roundiſh concave, obtuſe, patent, leaves; the corolla is compoſed of five oval, equal, permanent petals, leſs than the cup: the fruit is a roundiſh berry, containing a ſingle ſeed.

ANABIBAZON, in aſtronomy, a name given to the northern node of the moon or dragon's head. See DRAGON'S HEAD.

ANABLEPS, in ichthyology, a genus of malacopterygious fiſhes with ſix bones in the branchioſtege membrane, and only two ſmall fins in the extremity of the back. Of this genus there are only one known ſpecies.

ANABOLEUS, ἀναβολεύς, in antiquity, an appellation given to grooms of the ſtable, or equerries, who aſſiſted their maſters in mounting their horſes.

As the antients had no ſtirrups, or inſtruments that are now in uſe for mounting a horſe, they either jumped upon his back, or were aided in mounting by anabolei.

ANABROSIS, ἀναβρωσις, among antient phyſicians, a corroſion of the ſolid parts, by acid humours. It is alſo called *diabroſis.*

ANACALYPTERIA, ἀνακαλυπτήρια, in antiquity, feſtivals among the Greeks on the day that the bride was permitted to lay aſide her veil, and appear in public. The word is derived from a verb which ſignifies to uncover.

ANACAMPTIC, a name applied by the antients to that part of optics which treats of reflexion, being the ſame with what is now called catoptrics. See CATOPTRICS.

It is alſo uſed with regard to echoes, which are ſounds produced by reflexion.

ANACARDINE CONFECTION, *anacardina confectio*, among phyſicians, a preparation of *anacardiums*, or moluccabeans, with mirobalans, pepper, caſtoreum, refined ſugar, laurel-berries, cyprus, coſtus, and rocket; eſteemed excellent in all cold diſorders; alſo for ſtrengthening the memory and underſtanding.

ANACARDIUM, the *acajou*, or *caſhew-nut-tree*, in botany, a genus of the decandria monogynia claſs of plants, the calyx of which is a deciduous perianthium, compoſed of one leaf, divided into five parts, erect and acuminated: the corolla conſiſts of a ſingle petal; the tube is very ſhort; the limb is divided into five lanceolated reflex ſegments longer than the cup: there is no pericarpium; the ſeed is a large nut, of a kidney like ſhape, placed at the extremity of the receptacle, which is very large, fleſhy, and of a turbinated oval figure. See the article ACAJOU.

ANA-

ANACATHARSIS, ἀναχάθαρσις, among physicians, denotes a discharge of noxious humours by spitting; in which sense it stands contradistinguished from *catharsis*, or a purgation by stool. Hence,

ANACATHARTICS, in pharmacy, an appellation given to all such medicines as promote an anacatharsis; though some likewise comprehend emetics, errhines, masticatories, &c. under this term. See the article EMETIC, &c.

ANACEPHALÆOSIS, ἀνακεφαλαίωσις, in rhetoric, the same with recapitulation, See the article RECAPITULATION.

ANACHORET, ἀναχωρέτα, in church-history, denotes a hermit, or solitary monk, who retires from the society of mankind into some desart, with a view to avoid the temptations of the world, and to be more at leisure for meditation and prayer.

Such were Paul, Anthony, and Hilarion, the first founders of a monastic life, in Egypt and Palestine.

Anachorets, among the Greeks, consist principally of monks, who retire to caves or cells, with the leave of the abbot, and an allowance from the monastery; or who weary of the fatigues of the monastery, purchase a spot of ground, to which they retreat, never appearing again in the monastery, unless on solemn occasions. They are sometimes called ascetæ. See the article ASCETICS.

In the west, anchorets are extolled, by Peter Damian, as the most perfect sort of monks: they often amassed great riches, by the presents that were brought to them, out of regard to their piety; and all their wealth was bequeathed, at their death, to the monastery they had belonged to, in consequence of the permission to retire and live a solitary life.

ANACHRONISM, in matters of literature, an error with respect to chronology, whereby an event is placed earlier than it really happened, in which sense it stands opposite to parachronism.

ANACLASTICS, *anaclastica*, that part of optics which considers the refraction of light. See the article REFRACTION.

ANACLASTIC *glasses*, *Vitra Anaclastica*, a kind of sonorous phials, or glasses, chiefly made in Germany, which have the property of being flexible; and emitting a vehement noise by the human breath. They are also called vexing glasses, by the Germans, on account of the fright and disturbance they occasion by their resilition.

The anaclastic glasses are a low kind of phials with flat bellies, resembling inverted funnels, whose bottoms are very thin, scarce surpassing the thickness of an onion peel: this bottom is not quite flat, but a little convex. But upon applying the mouth to the orifice, and gently inspiring, or as it were sucking out the air, the bottom gives way with a horrible crack, and of convex, becomes concave. On the contrary, upon expiring or breathing gently into the orifice of the same glass, the bottom with no less noise bounds back to its former place, and becomes gibbous as before.

The anaclastic glasses first taken notice of, were in the castle of Goldbach; where one of the academists *Naturæ curiosorum*, having seen and made experiments on them, published a piece express on their history and phænomena.

They are all made of a fine white glass. It is to be observed in these, 1. That if the bottom be concave at the time of inspiration, it will burst; and the like will happen if it be convex at the time of expiration. 2. A strong breath will have the same effect even under the contrary circumstances.

ANACLETERIA, in antiquity, a solemn festival celebrated by the antients, when their kings or princes came of age, and assumed the reins of government. It is so called, because proclamation was made of this event to the people, who went to salute their prince, and congratulate him upon his new dignity.

ANACLINOPALE, among the antient athletæ, a kind of wrestling, performed on the ground; the combatants voluntarily throwing themselves down for that purpose.

ANACREONTIC VERSE, in antient poetry, a kind of verse, so called from its being much used by the poet Anacreon. It consists of three feet and a half, usually spondees and iambuses, and sometimes anapests; such is that of Horace,

Lydia dic per omnes.

ANACYCLUS, in botany, a genus of plants of the *syngenesia polygamia-superflua* of Linnæus, being the same with the santolinoides of other authors. See the article SANTOLINOIDES.

ANADEMA, ἀνάδημα, in antiquity, denotes the fillet which the kings of Persia wore round their heads.

Anadema denotes alſo a kind of ornament which women wore on their heads like a garland.

ANADIPLOSIS, ἀναδίπλωσις, in rhetoric and poetry, a repetition of the laſt word of a line, or clauſe of a ſentence, in the beginning of the next: thus,

Pierides, vos hæc facietis maxima Gallo:
Gallo, cujus amor, &c.
Et matutinis accredula vocibus inſtat,
Vocibus inſtat, & aſſiduas jacit ore querelas.

ANADIPLOSIS, among phyſicians, the renewal of a cold fit, in a ſemitertian fever, before the fit is entirely ended.

ANADROMOUS, among ichthyologiſts, a name given to all fiſh which, at ſtated ſeaſons, go from the freſh waters into the ſea, and afterwards return back again. Such are the ſalmon, and ſome other truttaceous fiſhes.

Anadromous fiſhes frequent rivers chiefly to depoſite their ſpawn; which done, they return again to the ſea; the young fry likewiſe make for the ſea, where having acquired their full growth, they return into the freſh water to lay their ſpawn.

ANAGALLIS, in botany, a genus of plants, belonging to the *pentandria-monogynia* claſs of Linnæus; the flower of which is monopetalous, multifid, and orbicular; the fruit is a globoſe capſule, containing only one cell, and dividing horizontally into two hemiſpheres; the ſeeds are numerous and angular.

Anagallis is very deterſive, of a heating and drawing quality, whence it extracts ſplinters out of the fleſh, has the virtue of drying without mordacity; and for that reaſon is eſteemed proper for conglutinating wounds, and helping putrid ulcers. See plate XVI. fig. 5.

ANAGLYPHICE, or ANAGLYPTICE, denotes the art of emboſſing. See the article EMBOSSSING.

ANAGNI, a town of Italy, in the Campagna di Roma, ſituated about thirty-two miles eaſt of Rome, in 13° 45′ eaſt lon. and 42° north latitude.

ANAGNOSTA, or ANAGNOSTES, in antiquity, a kind of literary ſervant, retained in the families of perſons of diſtinction, whoſe chief buſineſs was to read to them during meals, or at any other time when they were at leiſure.

The anagnoſtæ were taught to read with clearneſs, propriety, and good accent. They were in great credit under the emperor Claudius.

ANAGOGICAL, ſignifies myſterious, tranſporting, and is uſed to expreſs whatever elevates the mind, not only to the knowledge of divine things, but of divine things in the next life, ſuch as they paſs, and will paſs eternally between God and his ſaints. This word is ſeldom uſed, but with regard to the different ſenſes of ſcripture. The anagogical ſenſe is, when the ſacred text is explained with a regard to eternal life, the point which chriſtians ſhould have in view; for example, the reſt of the ſabbath, in the anagogical ſenſe, ſignifies the repoſe of everlaſting happineſs.

ANAGOGY, or ANAGOGE, ἀναγωγὴ, among eccleſiaſtical writers, the elevation of the mind to things celeſtial and eternal.

It is alſo an interpretation of a paſſage of ſcripture, by which the mind is raiſed to the conſideration of theſe things. See the preceding article.

ANAGRAM, ἀνάγραμμα, in matters of literature, a tranſpoſition of the letters of ſome name, whereby a new word is formed, either to the advantage or diſadvantage of the perſon or thing to which the name belongs; thus, from Galenus is formed Angelus: from James, Simea; and ſo of others.

Thoſe who adhere ſtrictly to the definition of an anagram, take no other liberty than that of omitting or retaining the letter H, at pleaſure; whereas others make no ſcruple to uſe E for Æ, V for W, S for Z, and C for K: and *vice verſa*.

Beſides anagrams formed as above, we meet with another kind in antient writers, made by dividing a ſingle word into ſeveral; thus, *ſuſtineamus* are formed out of the word *ſuſtineamus*.

Anagrams are ſometimes alſo made out of ſeveral words; ſuch is that on the queſtion put by Pilate to our ſaviour, *Quid eſt veritas?* whereof we have this admirable anagram, *viz. eſt vir qui adeſt.*

ANAGRAMMATIST, a perſon who compoſes or deals much in anagrams. See the preceding article.

ANAGROS, in commerce, a meaſure for grain uſed in ſome cities of Spain, particularly at Seville.

Forty-ſix anagros make about 10¼ quarters of London.

ANAGYRIS, BEAN-TREFOIL, in botany, a genus of plants with papilionaceous flowers, the vexillum of which is ſhorter than any of the other petals, and its fruit an oblong pod, containing kidney-like ſeeds: to this it is to be added, that three leaves ſtand on every petal. It belongs

to

to the *diadelphia decandria* class of Linnæus.

According to Lemery, the leaves of *anagyris* are laxative, and its seeds emetic.

ANALECTA, or ANALECTES, in antiquity, a servant whose employment it was to gather up the off-falls of tables.

ANALECTA, analects, in a literary sense, is used to denote a collection of small pieces, as essays, remarks, *&c.*

ANALEMMA, αναλημμα, in geometry, a projection of the sphere on the plane of the meridian, orthographically made by strait lines and ellipses, the eye being supposed at an infinite distance, and in the east or west points of the horizon. See *orthographic projection of* MAPS *on the plane of the meridian.*

ANALEMMA denotes likewise an instrument of brass or wood, upon which this kind of projection is drawn, with an horizon and cursor fitted to it, wherein the solstitial colure, and all circles parallel to it, will be concentric circles; all circles oblique to the eye, will be ellipses; and all circles whose planes pass through the eye, will be right lines.

The use of this instrument is to shew the common astronomical problems, which it will do, though not very exactly, unless it be very large.

This instrument is very antient, Ptolemy having written upon it in a peculiar treatise. As to the method of constructing it, see Agulonius's Optics, Taquet's Optics, Witty in his Treatise of the Sphere, and Dechales de Astrolabiis.

ANALEPSIS, among physicians, denotes the augmentation or nutrition of an emaciated body. Hence,

ANALEPTICS, in pharmacy, are restorative medicines, proper to nourish the body when much weakened. See the article RESTORATIVE.

ANALOGICAL, in a general sense, denotes something belonging to, or partaking of the nature of analogy. Hence, *Analogical syllogism* is one whose force chiefly depends on the analogy between the two premises. See SYLLOGISM.

ANALOGISM, among logicians, the arguing from the cause to the effect.

ANALOGISM, among physicians. See the article ANALOGY.

ANALOGISTA, among civilians, denotes a tutor, who is not obliged to give an account of his conduct.

ANALOGY, αναλογια, in matters of literature, a certain relation and agreement between two or more things; which in other respects are entirely different; thus the foot of a mountain bears an analogy to the foot of an animal, although they are two very different things.

There is likewise an analogy between beings that have some conformity or resemblance to one another: for example, between animals and plants, and between metals and vegetables; but the analogy is still stronger between two different species of certain animals.

Analogy enters much into all our reasoning, and serves to explain and illustrate but not to demonstrate. Nevertheless, a great part of our philosophy hath no other foundation than analogy, the utility of which consists in superseding all necessity of examining minutely every particular body; for it suffices us to know, that every thing is governed by general and immutable laws, in order to regulate our conduct with regard to all similar bodies, as we may reasonably believe that they are all endowed with the same properties: thus, we never doubt that the fruit of the same tree has the same taste.

It is true, reasoning by analogy may sometimes induce to error: thus, the analogy between the constellation called leo, and the animal of that name, has given room to some astrologers to imagine that children born under that constellation were inspired with a martial spirit.

ANALOGY, among geometricians, denotes a similitude of ratios. See RATIO.

ANALOGY, in medicine, is the similitude observable among several diseases, in virtue of which they are treated nearly in the same manner: thus, by analogy, bleeding is prescribed in colds, the pleurisy, peripneumony, *&c.* as being all of an inflammatory nature. See the article INFLAMMATORY DISEASES.

ANALOGY, among grammarians, is the correspondence which a word or phrase bears to the genius and received forms of a language.

ANALOGY *of doctrine*, among critics, is the explaining the passage of an author, in a manner consistent with the system which he is known to have generally followed. And, nearly in the same sense, is

ANALOGY *of faith*, among divines, the connection which subsists between the several articles of the christian faith, in contradistinction from reason on the one hand, and from authority and tradition on the other. Hence, by analogy of faith, all obscure passages of scripture are to be interpreted, agreeably to the general system

ſyſtem clearly demonſtrable from holy writ.

ANALOGY, in rhetoric, a figure of ſpeech otherwiſe called compariſon. See the article COMPARISON.

ANALYSIS, in a general ſenſe, is the reſolution of ſomething compounded, into its conſtituent parts. Hence,

ANALYSIS, among logicians, is a method of tracing things backward to their ſource, and of reſolving knowledge into its original principles.

It is alſo called the method of reſolution, and ſtands oppoſed to the ſynthetic method, or method of compoſition. See the article METHOD.

The art of this method conſiſts chiefly in combining our perceptions, and claſſing them together with addreſs; and in contriving a proper expreſſion of our thoughts, ſo as to repreſent their ſeveral diviſions, claſſes, and relations. This is clearly ſeen in the manner of computing by figures in arithmetic, but more particularly in the ſymbols applied in reſolving algebraical problems.

ANALYSIS, among mathematicians, the art of diſcovering the truth or falſhood of a propoſition, or its poſſibility and impoſſibility. This is done by ſuppoſing the propoſition, ſuch as it is, true; and examining what follows from thence, until we arrive at ſome evident truth, or ſome impoſſibility, of which the firſt propoſition is a neceſſary conſequence; and from thence eſtabliſh the truth or impoſſibility of that propoſition.

The analyſis of the antient geometricians conſiſted in the application of the propoſitions of Euclid, Apollonius, &c. till they arrived, proceeding ſtep by ſtep, at the truth required. That of the moderns, though not ſo elegant, muſt, however, be allowed more ready and general. By this laſt, geometrical demonſtrations are wonderfully abridged, a number of truths are frequently expreſſed by a ſingle line, and whole ſciences may ſometimes be learned in a few minutes, which otherwiſe would be ſcarcely attained in many years.

Analyſis is divided, with regard to its object, into that of finites and infinites.

Analyſis of finite quantities, that which is called ſpecious arithmetic. See the article ARITHMETIC.

Analyſis of infinites, the ſame with fluxions. See the article FLUXIONS.

ANALYSIS, in chemiſtry, the reduction of a mixed body into its principles. This is the chief object of chemiſtry, and is principally effected by means of fire. The antient chemiſts admitted only three principles or elements, ſalt, ſulphur, and mercury: to which the moderns have added two more, water and earth: into theſe all bodies are reſolvable by a chemical analyſis, though no operation, no human art, can exhibit them pure and elementary.

On this then, as well as on other accounts, it is far from being clear, that a chemical analyſis gives the true firſt elements of things; for it appears that there are corpuſcles, which, when alone, are either ſo hard as to be incapable of being divided, or changing their figures; or ſo minute, as to eſcape the action of ſuch bodies as might otherwiſe divide them.

ANALYSIS is alſo uſed to ſignify the anatomical diſſection of an animal. See the article ANATOMY.

ANALYSIS, among grammarians, is the explaining the etymology, conſtruction, and other properties of words. See the article ETYMOLOGY, &c.

ANALYSIS, in rhetoric, is the ſtripping a diſcourſe of all its gorgeous dreſs of tropes and figures; or, ſhewing what uſe the orator has made of them, to embelliſh and ſet off every thing to the beſt advantage.

ANALYSIS *of powers*, is the operation of reſolving them into their roots, otherwiſe called evolution. See the articles EVOLUTION, POWER, and ROOT.

ANALYSIS is alſo uſed for a brief, but methodical illuſtration of the principles of a ſcience; in which ſenſe it is nearly ſynonymous with what we otherwiſe call a ſynopſis.

ANALYSIS likewiſe denotes a table of the principal heads of a continued diſcourſe, diſpoſed in their natural order.

ANALYST, a perſon who makes uſe of the analytical method of reſolving problems. See the article ANALYSIS.

ANALYTIC, or ANALYTICAL, in a general ſenſe, denotes ſomething belonging to analyſis. See the article ANALYSIS.

ANALYTICS is more particularly uſed for the mathematical and logical analyſes above explained.

ANAMNESTICS, among phyſicians, ſigns by which the preſent ſtate of the body is diſcovered, in contradiſtinction from prognoſtics. See PROGNOSTIC.

Anam-

Fig. 1. ANANAS, the *PINE-APPLE.*



Fig. 2. ANAPODOPHYLLUM.

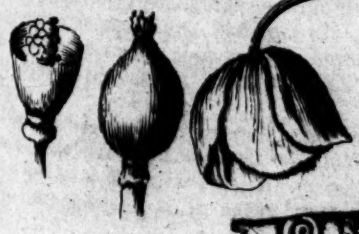


Fig. 3. The ANCHOVY.



T. Jefferys sculp.

BRITISH MUSEUM

Anamneſtics, according to Blancard, alſo denote remedies which reſtore the memory: ſuch are all ſpirituous things.

ANAMORPHOSIS, ἀναμόρφωσις, in perſpective and painting, a monſtrous projection, or repreſentation of an image on a plane or curve ſurface, which, beheld at a proper diſtance, ſhall appear regular and in proportion.

To delineate an anamorphoſis upon a plane: 1. Draw the ſquare A B C D, (plate XVI. fig. 6.) of a bigneſs at pleaſure, and ſubdivide it into a number of little ſquares. 2. In this ſquare, called the craticular prototype, let the image to be repreſented deformed, be drawn. 3. Then draw the line *a b* (ibid. fig. 7) equal to A B, and divide it into the ſame number of equal parts as the ſide of the prototype A B. 4. Erect the perpendicular E V, in the middle of *a b*, ſo much the longer as the deformity of the image is to be greater. 5. Draw V S perpendicular to E V, ſo much the ſhorter as you would have the image appear more deformed. 6. From each point of diviſion draw ſtrait lines to V, and join the points *a* and S, by the right line *a* S. 7. Through the points *d e f g* draw right lines parallel to *a b*, then will *a b c d* be the ſpace in which the monſtrous projection is to be delineated: this ſpace is called the craticular ectype. Laſtly, in every areola, or ſmall trapezium, of the ſpace *a b c d*, draw what appears delineated in the correſpondent areola of the ſquare A B C D; and thus you will obtain a deformed image, which will appear in juſt proportion to an eye diſtant from it the length F V, and raiſed above its height V S.

An image may be deformed mechanically, if you place it, having little holes made here and there in it with a needle, againſt a candle, and obſerve where the rays going through theſe holes, fall on a plane or curve ſurface; for they will give the correſponding points of the image to be deformed.

ANANAS, the PINE-APPLE, in botany, Tournefort's name for a genus of plants; the flower of which conſiſts of only one infundibuliform petal, divided into three ſegments at the edge; and its fruit is of a turbinated form, containing a number of kidney-like ſeeds. See plate XVII. fig. 1.

The *ananas* belongs to the *hexandria-monogynia* claſs of Linnæus, who makes it a ſpecies of Bromelia. See BROMELIA. No fruit comes up to it, either for its delicious flavour or beautiful colour. It is propagated with us in ſtoves, and ſhould be gathered and eaten as ſoon as ripe, which is known by its ſtrong and agreeable ſmell, as well as ſoftneſs.

The juice of the *ananas* makes an excellent wine, very proper to be given in a nauſea, and to provoke urine: Lemery adds, that on the ſpot where it grows naturally, they make a confection of it, which is brought here whole, and is good to reſtore a weak conſtitution.

ANAPÆST, *anapæſtus*, in antient poetry, a foot conſiſting of two ſhort ſyllables and one long: ſuch is the word ſcŏpŭlōs.

It is juſt the reverſe of the dactyl. See the article DACTYL.

ANAPÆSTIC VERSES, thoſe conſiſting wholly or chiefly of anapæſts.

ANAPHORA, in rhetoric, the repetition of the ſame word or words in the beginning of a ſentence or verſe: thus Virgil.

Pan etiam Arcadiâ mecum ſi judice certet;
Pan etiam Arcadiâ dicat ſe judice victum.

ANAPHRODISIA, ἀναφροδισία, in antient phyſic, denotes impotence, with regard to venereal commerce.

ANAPLASIS, among antient phyſicians, the replacing of a fractured bone in the ſame ſituation it obtained before it was broken.

Anapläſis alſo ſignifies a renutrition of the extenuated fleſh.

ANAPLEROSIS, in a general ſenſe, is the ſame with repletion. See the article REPLETION.

Anaplerоſis, among ſurgeons, expreſſes the reſtoring deficiences; and in this ſenſe is the ſame with *proſthеſis*. See the article PROSTHESIS.

ANAPLEROTICS, in pharmacy, ſuch medicines as promote the growth of fleſh in wounds and ulcers.

Of this kind are ſeveral gums and balſams, as ſarcocolla and the vulnerary balſam.

Anaplerotics are alſo called incarnatives. See the article INCARNATIVES.

ANAPODOPHYLLUM, in botany, the name by which Tournefort calls the *podophyllum* of Linnæus. See plate XVII. fig. 2. and the article PODOPHYLLUM.

ANARCHY, in matters of polity, ſuch a confuſion in the ſtate, that no ſupreme authority is lodged either in the prince or other rulers, and conſequently the people live at large without ſubordination, or any reſpect for the laws.

All governments, in general, tend to one extreme or other, *viz.* deſpotiſm or anarchy.

No body can be fond of anarchy but thoſe whoſe affairs are deſperate; becauſe private perſons can never be ſure of their lives and fortunes when the country is in a ſtate of anarchy.

ANARRHICHAS, in the artedian ſyſtem of ichthyology, the name of a genus of malacopterygious fiſhes, called by other writers *lupus-marinus*, the ſea-wolf. See the article LUPUS.

ANARTHRA, a claſs of naked inſects, diſtinguiſhed from all others by having neither wings nor limbs.

To this claſs belong all kinds of worms and leeches.

ANAS, in zoology, a genus of birds of the order of the *anſeres*, according to Linnæus, the beak of which is convex, with an obtuſe point, and the whole verge furniſhed with tranſverſe lamelloſe teeth; the tongue is obtuſe and ciliated. Under this genus are comprehended the *platea*, *cygnus*, *anſer*, *eider*, *bernicla*, *penelope*, *boſchas*, *clangula*, *glaucium*, *querquedula*, *fuligula*, &c.

ANASARCA, in medicine, a ſpecies of dropſy, wherein the ſkin appears puffed up and ſwelled, and yields to the impreſſion of the fingers, like dough.

The cauſes of this diſeaſe are, 1. A diminution of the *vis vitæ*. 2. A viſcidity in the blood and lymph, by which means the extremities of the veſſels being obſtructed, and the adipoſe cellules filled up, a greater quantity of lymph is collected in the body than can be received by the veins and lymphatic ducts, or expelled by the pores and other abſorbent veſſels.

If the humour be too viſcous, it is called *leucophlegmatia*. See the article LEUCOPHLEGMATIA.

As to the remedies for this diſtemper, ſee the article DROPSY.

ANASTASIS, among antient phyſicians, denotes a riſing up to go to ſtool. It likewiſe ſignifies a migration of humours, when expelled from one place, and obliged to remove to another.

ANASTATICA, the ROSE of JERICHO, in botany, a genus of the tetradynamia ſiliculoſa claſs of plants, the calyx of which is a deciduous perianthium, conſiſting of four oval, oblong, concave, erect and deciduous leaves: its flower conſiſts of four roundiſh petals, diſpoſed in the form of a croſs; and its fruit is a ſhort bilocular pod, containing in each cell a ſingle roundiſh ſeed.

ANASTOMASIS, or ANASTOMOSIS, in anatomy, the opening of the mouths of veſſels, in order to diſcharge their contained fluids; as in the menſes, hæmorrhoids, blood from the noſe or lungs, occaſioned either by the weakneſs of the veſſel, or the quantity of blood.

ANASTOMASIS likewiſe denotes the communication of two veſſels at their extremities; for example, the inoſculation of a vein with a vein, of an artery with an artery, or of an artery with a vein.

ANASTOMATICS, in pharmacy, medicines which have the power of opening the mouths of veſſels, and promoting the circulation of the blood.

Such are all deobſtruent, cathartic, ſudorific, and diuretic medicines.

ANASTROPHE, ανασροφη, in rhetoric and grammar, denotes the inverſion of the natural order of the words: ſuch is *ſaxa per & ſcopulos*, for *per ſaxa & ſcopulos*.

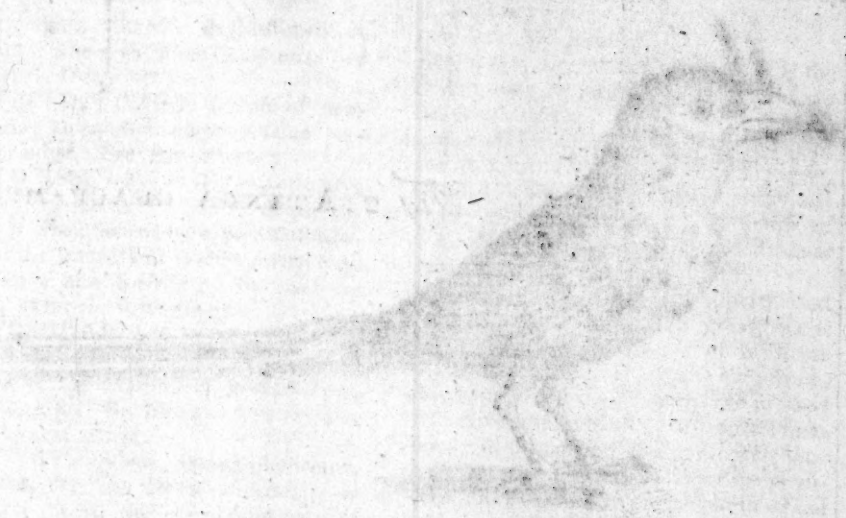
ANATHEMA, αναθημα, among eccleſiaſtical writers, imports whatever is ſet apart, ſeparated, or devoted; but is moſt uſually meant to expreſs the cutting off a perſon from the privileges of a ſociety and communion with the faithful.

The anathema differs from excommunication in the circumſtance of being attended with curſes and execrations. It was practiſed in the primitive church againſt notorious offenders; and the form of that pronounced by Synecius againſt one Andronicus, is as follows: "Let no church of God be open to Andronicus, but let every ſanctuary be ſhut againſt him. I admoniſh both private men and magiſtrates, neither to receive him under their roof, nor to their table; and prieſts more eſpecially, that they neither converſe with him living, nor attend his funerals when dead."

Several councils alſo have pronounced anathemas againſt ſuch as they thought corrupted the purity of the faith, and their deciſions have been conceived in the following form: *Si quis dixerit*, &c. *anathema ſit*.

There are two kinds of anathemas, the one judiciary, and the other abjuratory. The former can only be denounced by a council, a pope, or a biſhop; the latter makes a part of the ceremony of abjuration, the convert being obliged to anathematize the hereſy he abjures. See the article ABJURATION.

ANA-



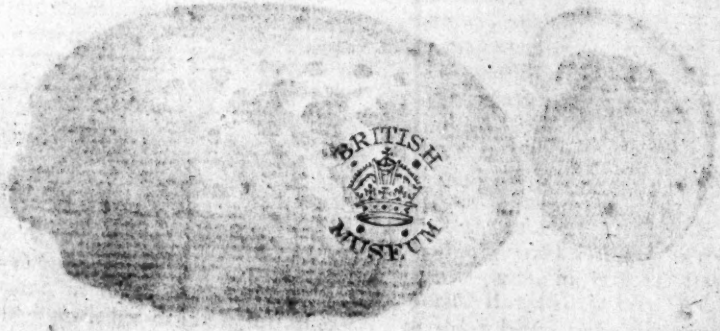

BRITISH
MUSEUM



Fig. 1. ASYMPTOTE.

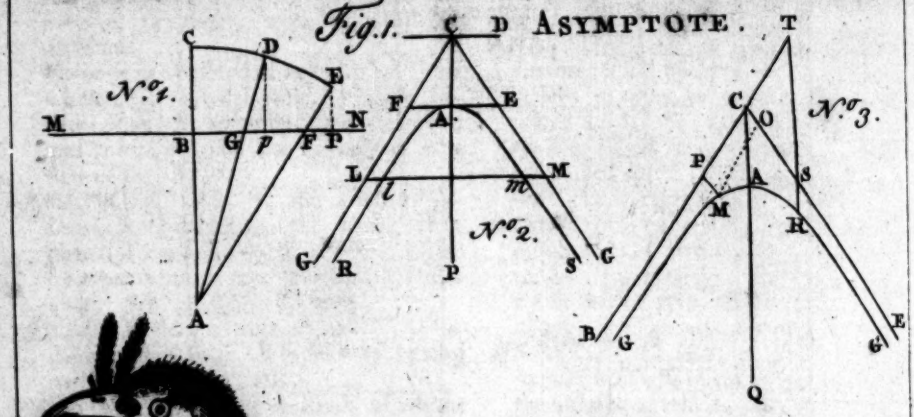




Fig. 2. ATINGA-GUACU-MUCU.

Fig. 3. AURES MARINÆ, *EAR-SHELLS*.

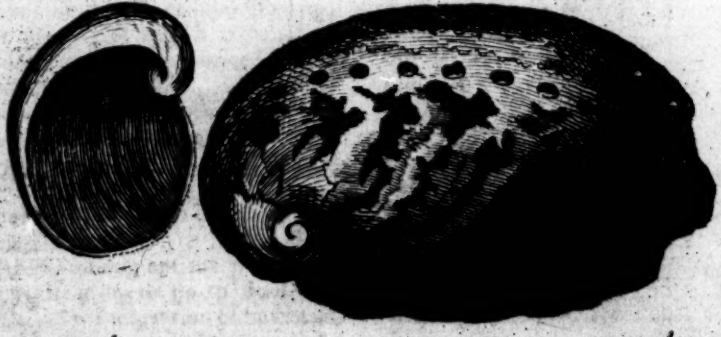


Fig. 4. AXIS.

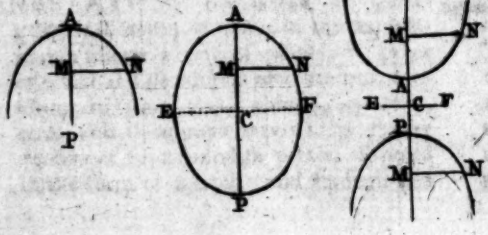
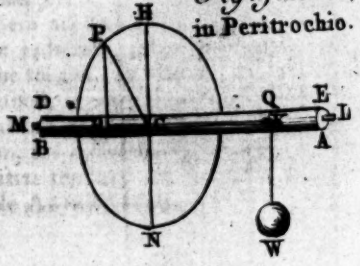


Fig. 5. AXIS, in Peritrochio.



T. Jefferys sculp.

ANATHEMA, in heathen antiquity, was an offering or preſent made to ſome deity, ſo called from its being hung up in the temple.

Whenever a perſon left off his employment, it was uſual to dedicate the tools to the patron-deity of ſuch a trade. Perſons too, who had eſcaped ſome imminent danger, as ſhipwreck, and the like, or had met with any other remarkable inſtance of good fortune, ſeldom failed to teſtify their gratitude by ſome preſent of this kind.

ANATHEMATA likewiſe denote chriſtian offerings, otherwiſe called donations. See the article DONATION.

ANATHEMATIZING, the act of pronouncing an anathema againſt ſome perſon or other. See ANATHEMA.

ANATOCISM, ἀνατοκισμός, in antiquity, an uſurious intereſt for the uſe of money. This is when the lender accumulates together the intereſts of ſeveral years, and requires a new intereſt to be paid for them, as for the firſt principal.

ANATOMICAL, in a general ſenſe, denotes ſomething belonging to anatomy: Hence we ſay anatomical preparations, injections, &c. See PREPARATION, &c. and the next article.

ANATOMY, ἀνατομὴ, among phyſicians, ſurgeons, &c. the art of diſſecting, or taking to pieces, the ſeveral ſolid parts of animal bodies, with a view to diſcover their ſtructure and uſes.

Anatomy, in reſpect of its ſubject, is divided into human and comparative.

Human anatomy is that which is employed on the human body, and comparative anatomy that which is employed upon the bodies of other animals, theſe ſerving for the more accurate diſtinctions of ſeveral parts, and ſupplying the defects of human ſubjects.

Anatomy from its various ends, may be ſaid to be of four kinds; the primary one is an acquaintance with the work of the creator, in the human frame, as an intimate knowledge of the figure of the ſeveral parts of the human body, their connections, communications, actions, and uſes, is one of the ſtrongeſt arguments againſt atheiſm: the ſcience, therefore, treated in this light, may be called philoſophical or theological anatomy.

Of the ſecondary ends, the firſt is health, for the preſervation of which, reſtoring it when impaired by diſeaſes, or even preventing their acceſs, nothing ſurely is more neceſſary than a true knowledge of the ſtructure of that frame which is liable to be injured: in this ſenſe anatomy is ſtiled medical; and many, indeed, eſtabliſh this as the firſt ſpecies of it, and the preſerving and reſtoring health as its primary object.

Another end of anatomy is determining the cauſe of ſuſpicious deaths, impotency, barrenneſs, the true times of pregnancy and delivery, the mortality of wounds, and a multitude of other caſes of great importance to be adjuſted in a court of judicature: and in this ſenſe the ſcience may be called juridical.

But, laſtly, a great end of anatomy is the determining the cauſe and manner of the death of diſeaſed perſons, from a ſubſequent diſſection of the body: this is of the utmoſt uſe in the practice of phyſic, to diſcover the latent cauſes of many diſeaſes, which, without the aſſiſtance of theſe diſſections, the world could never have been truly acquainted with.

Upon the whole, then, it appears that the uſe of anatomy is very great, nor is it confined to the bounds of medicine alone: the philoſopher and the magiſtrate, the painter and the ſculptor, are in their reſpective employments, more or leſs qualified, in proportion to the progreſs they have made in this ſcience; but the phyſician and ſurgeon are the people to whom it is moſt immediately neceſſary; and who, without a perfect knowledge of it, cannot do juſtice to the world in their profeſſions. What the needle is to the mariner, anatomy is to both theſe; and we may venture to ſay, that without its aſſiſtance, they would be rather detrimental than beneficial to mankind.

With regard to the antiquity of anatomy, it ſeems ſcarcely poſſible, but that the ſlaughter of beaſts for the uſe of man, caſualties, murders, and the accidents of war, muſt have furniſhed mankind with a general knowledge of the ſtructure of the parts, in very early ages of the world. But it is not very certain at what period it began to be cultivated as a ſcience. This, however, muſt have been very early, eſpecially if we pay any regard to Manetho, the famous egyptian writer, who, according to Euſebius, relates, that Athotis, an egyptian king, wrote ſome treatiſes of anatomy. This king, if the egyptian chronology was to be depended upon, lived many ages before Adam. This, however falſe with regard to time, tends to prove the great antiquity of the ſcience. However this be,

it is certain that before, or, at leaſt, in the days of Homer, anatomy was much cultivated, ſince this author appears to have had a competent knowledge of the parts, and to have been well verſed in the renunciation of wounds, ſo as to give an accurate account of their effects in almoſt all parts of the body. But Hippocrates is the firſt author, at leaſt extant, who treated of anatomy ſcientifically. This great writer, conſcious of his noble and exalted genius, publiſhed many anatomical obſervations, which, though disjointed, and ſcattered here and there in his works, yet make up almoſt an entire body of anatomy, when collected together. He was followed by Democritus, Empedocles, Alcmæon of Crotona, Ariſtotle, Galen, &c. Anatomy, however, made but ſlow, and almoſt imperceptible advances towards perfection, till the time of Andreas Veſalius, who was born at Bruſſels in the year 1514. His ſuperior genius, in conjunction with his indefatigable application and induſtry, ſoon raiſed him to ſuch a pitch of anatomical knowledge, as rendered him at once the ornament of his own, and the admiration of future ages. This accurate anatomiſt was followed by Stephanus, Vicary, Gemini, Sylvius, Servetus, Columbus, Fabricius, Riolanus, Libavius, &c. who all contributed to the improvement of anatomy. In 1622, Caſpar Aſellius, profeſſor of anatomy at Pavia, obſerved the lacteal veſſels in the meſentery, which he deſcribes as conveying the chyle to a large gland, ſeated in the center of the inteſtines. He, however, modeſtly declines the honour of this diſcovery, becauſe he ſays theſe lacteals were known to Hippocrates, Eraſiſtratus, and Galen. The celebrated Harvey, in the year 1628, publiſhed his diſcovery of the circulation of the blood, which was of the moſt importance to phyſic of any that was ever made, and acquired him an immortal name. Pecquet, in the year 1651, diſcovered the reſervoir of the chyle, and the thoracic duct. And Rudbecks and Bartholine in 1650, and 1651, diſcovered the lymphatic veſſels. Wharton, in 1655, diſcovered the lower ſalival ducts; and Steno the upper ſalival ducts, thoſe of the palate, noſtrils, and eyes, in 1661. Willis ſucceeded him, and publiſhed an accurate anatomy of the brain and nerves.

Anatomy is alſo greatly indebted to the accurate obſervations of Malpighius, who died in 1694. This great anatomiſt made a vaſt number of diſcoveries in the lungs, brain, liver, ſpleen, glands, lymphatics, &c. by the help of the microſcope. The celebrated Ruyſch has happily elucidated the finer and more intricate part of the human machine, by means of injections. Other more late writers upon anatomy are Maurice, Hoffman, Cowper, Ridley, Bartholine, Keill, How, Morgagni, Valſalva, Pacchionus, Drake, Vercellonius, Santorini, Cheſelden, Monro, Douglas, Heiſter, Winſlow, &c.

ANATOMY, is alſo uſed, in a leſs proper ſenſe, for the analyzing of compound bodies. See the article ANALYSIS.

ANATOMY *of plants*, is otherwiſe called dendranatomy. See the articles PLANT and DENDRANATOMY.

ANATRON, NATRON, or NATRUM, in natural hiſtory. See NATRUM.

Beſides the ſalt commonly called by this name, ſome likewiſe uſed it to denote the ſcum found on the ſurface of the compoſition of glaſs, when in fuſion; as alſo for the *terra ſarraſenica*, and a nitrous juice, which concretes in vaults and other ſubterraneous places.

ANATRON is ſometimes alſo uſed for a compound ſalt, made of quick lime, alum, vitriol, common ſalt, and nitre; and uſed as a flux to promote the fuſion of metals. See the article FLUX.

ANAXIMANDRIANS, in the hiſtory of philoſophy, the followers of Anaximander, the moſt antient of the philoſophical atheiſts, who admitted of no other ſubſtance in nature but body.

ANBURY, among farriers, the ſame with ambury. See the article AMBURY.

ANCASTER, a town of Lincolnſhire, near Lincoln, weſt longitude 30′. north latitude 52°. 50′.

ANCENIS, a town of France, in the province of Britany, weſt longitude 1°. 5′. north latitude 47°. 20′.

ANCESTORS, thoſe from whom a perſon is deſcended in a ſtrait line, the father and mother not included.

The law makes a difference between anceſtors and predeceſſors, the firſt being applied to a natural perſon, as a man and his anceſtors, and the latter to a body politic, as a biſhop and his predeceſſors. We ſay likewiſe, a prince and his predeceſſors, to ſignify the kings that have reigned before; but we never ſay a king and his anceſtors, unleſs he is by birth deſcended of his predeceſſors.

ANCESTREL, in law, ſomething that relates to, or has been done by one's anceſtors. Thus,

Homage anceſtrel ſignifies homage performed by one's anceſtors.

ANCHILOPS, in medicine, a ſmall tumour in the great angle of the eye, frequently degenerating into an abceſs, or fiſtula lacrymalis. See FISTULA.

Moſt authors uſe the terms anchilops and ægilops, in a ſynonymous ſenſe. See the article ÆGILOPS.

ANCHOR, *anchora*, in maritime affairs, an extremely uſeful inſtrument, ſerving to retain a ſhip or boat in its place.

It is a very large and heavy iron inſtrument, with a double hook at one end, and a ring at the other, by which it is faſtened to a cable.

It is caſt into the bottom of the ſea, or rivers, where taking its hold, it keeps ſhips from being drawn away by the wind, tide, or currents.

The parts of an anchor are: 1. The ring to which the cable is faſtened. 2. The beam, or ſhank, which is the longeſt part of the anchor. 3. The arm, which is that which runs into the ground. 4. The flouke or fluke, by ſome called the palm, the broad and peaked part, with its barbs, like the head of an arrow, which faſtens into the ground. 5. The ſtock, a piece of wood faſtened to the beam near the ring, ſerving to guide the fluke, ſo that it may fall right, and fix in the ground.

There are ſeveral kinds of anchors: 1. The ſheet anchor, which is the largeſt, and is never uſed but in violent ſtorms, to hinder the ſhip from being driven aſhore. 2. The two bowers, which are uſed for ſhips to ride in a harbour. 4. The ſtream anchor. 5. The grapnel. The iron of which anchors are made, ought neither to be too ſoft nor too brittle; for, if the iron be brittle, the anchor is apt to break, and if it be ſoft, the anchor will bend. In order to give them a proper temper, it is the practice to join brittle with ſoft iron, and for this reaſon, the ſpaniſh and ſwediſh iron ought to be preferred.

The ſhank of an anchor is to be three times the length of one of its flukes, and a ſhip of 500 tons, hath her ſheet anchor of 2000 weight; and ſo proportionably for others ſmaller or greater, although Aubin obſerves, that the anchors of a large veſſel are made ſmaller in proportion than thoſe of a ſmall one.

The anchor is ſaid to be a-peak, when the cable is perpendicular between the hawſe and the anchor. See HAWSES.

An anchor is ſaid to come home when it cannot hold the ſhip. An anchor is foul, when, by the turning of the ſhip, the cable is hitched about the fluke. To ſhoe an anchor, is to fit boards upon the flukes, that it may hold the better in ſoft ground. When the anchor hangs right up and down by the ſhip's ſide, it is ſaid to be a cock bell, upon the ſhip's coming to an anchor.

The inhabitants of Ceylon uſe large ſtones inſtead of anchors, and in ſome other places of the Indies, the anchors are a kind of wooden machines loaded with ſtones.

Shoe for an ANCHOR. See SHOE.

ANCHOR is alſo uſed, in a more general ſenſe, for any thing that holds faſt another. Thus the ſea-muſcles are ſaid to ride at anchor by a kind of threads, emitted out of their bodies and faſtened to rocks and other bodies. See MUSCLE.

ANCHOR, in architecture, a ſort of carving, ſomething reſembling an anchor. It is commonly placed as part of the enrichments of the boultins of capitals of the tuſcan, doric, and ionic orders, and alſo of the boultins of bed mouldings of the doric, ionic, and corinthian cornices; anchors and eggs being carved alternately through the whole buildings.

ANCHOR, in heraldry, are emblems of hope, and are taken for ſuch in a ſpiritual as well as in a temporal ſenſe.

ANCHORAGE, or ANCHORING-GROUND, a place where a ſhip may caſt anchor.

The beſt anchoring ground is ſtiff clay or hard ſand; and the beſt place for riding at anchor, is where a ſhip is land-locked, and out of the tide.

ANCHORAGE, in law, is a duty taken of ſhips for the uſe of the port or harbour, where they caſt anchor: for the ground there belonging to the king, no man can let fall anchor thereon, without paying the king's officers for ſo doing.

ANCHORALIS PROCESSUS, the ſame as the proceſſus coracoides. See the article CORACOIDES.

ANCHORED, or ANKERED, in heraldry, is ſaid of a croſs, the four extremities of which reſemble the floukes of an anchor. This croſs reſembles very much the croſs moline, the whole difference between them conſiſting only in this, that the anchored croſs is ſomewhat ſharper at the

points than the moline. See MOLINE.

ANCHOVY, in ichthyology, and commerce, a ſpecies of clupea, with the upper jaw longeſt. See the article CLUPEA. The anchovy is ſo like the common ſprat, another ſpecies of clupea, that it is no wonder this fiſh is often pickled and ſold under its name. See plate XVII. fig. 3. Anchovies are much eſteemed in ſauces; the common way of eating them being with oil, vinegar, &c.

ANCHUSA, in botany, a genus of the pentandria monogynia claſs of plants, the calyx of which is an oblong, cylindric, acute, perianthium, divided into five ſegments, and permanent; the corolla conſiſts of a ſingle petal; the tube is cylindric, and of the length of the cup; the limb is lightly divided into five ſegments, erecto-patent and obtuſe; the opening is cloſed by five oblong, convex, prominent, and connivent ſquamulæ: there is no pericarpium: the cup becomes larger, and ſerves as a fruit, containing in its cavity four oblong, obtuſe, and gibbous ſeeds.

ANCHYLOBLEPHARON, among phyſicians, denotes a coheſion of the eye-lids. In this diſorder of the eye-lids, they ſometimes cohere to each other, and ſometimes to the globe of the eye itſelf. This is eaſily diſtinguiſhable from the ſlight glewing up of the eye-lids, from the ſmall-pox, or other the like cauſes. This diſorder is ſometimes brought with an infant into the world, ſometimes it comes upon adults by a fleſhy excreſcence from the angles of the eyes, and ſometimes it happens from accidents, as blowing up of gun-powder, and the like. This is always dangerous, and difficult of cure, but moſt ſo when the eye-lids grow to the cornea. They are to be divided by a blunt-pointed pair of ſciſſars, and when ſeparated from each other, it muſt be tried whether they adhere to the eye; if they do, they muſt be ſeparated with great caution with a blunt pointed ſcalpel; but there is here great danger of injuring the ſight; when ſeparated, they muſt be kept from touching one another, to prevent their cohering again, by lint, or a plate of lead.

ANCLAM, a town of Pomerania, in Germany, ſituated on the river Pene, in eaſt long. 14°. and north latit. 54°. about forty-five miles north weſt of Stetin.

ANCLE, *Talus*, and *Aſtragalus*, in anatomy. See the article ASTRAGALUS.

ANCLE *luxated*, in ſurgery. The ancle is ſubject to be luxated, either in running, in jumping, or even in walking; and that in four directions, either inward or outward, backward or forward. When the ancle is luxated inward, the bottom of the foot is turned outward; and on the contrary, when it is luxated outward, the bottom of the foot is turned inward, which latter caſe is indeed much more frequent than the others. If it is diſlocated forward, the heel becomes ſhorter, and the foot longer than it ſhould be; and if backward, the contrary ſigns to theſe will appear. The ancle however can ſcarce poſſibly be luxated outwards, unleſs the fibula be ſeparated from the tibia, or elſe quite broken, which may happen to the external ancle; nor is it at all uncommon for a luxation of the ancle to be attended with very grievous ſymptoms, eſpecially when occaſioned by ſome great external violence; nor can it indeed well happen otherwiſe, in this caſe, ſince the diſtortion of the foot muſt neceſſarily overſtrain the adjacent tendons, ligaments, and nerves, and thence excite very violent pains, and other bad ſymptoms, or the veins and arteries may alſo be very eaſily lacerated, which will occaſion a large extravaſation of blood about the whole foot, which too often gives riſe to a gangrene. It is, however, neceſſary to obſerve, that the ancle is not always luxated, after it has been violently ſtrained by leaping or turning the foot on one ſide; for it ſometimes happens, that the ancle is not diſlocated on theſe occaſions, but only the parts are violently contuſed and ſtrained. The ancle, when truly luxated, is more or leſs difficult to be reduced, according to the violence of the force by which the accident was occaſioned. The moſt ready way, however, of reducing a luxation of the ancle, according to Heiſter, is, to place the patient upon a bed, ſeat, or table, letting the leg and foot be extended in oppoſite directions by two aſſiſtants, while the ſurgeon replaces the bones with his hands and fingers in their proper ſituation. When the foot is by this means reſtored to its proper poſition, it is to be well bathed with oxycrate and ſalt, and then carefully bound up with a proper bandage. The patient muſt be enjoined to keep his bed for a conſiderable time, till the bad ſymptoms are gone, and the ancle has recovered its ſtrength ſo far, as to bear the weight of the body, without any uneaſineſs or danger.

ANCOBER, or RIO-COBRE, a river on the coaſt of Guinea, in Africa.

ANCON,

ANCON, *αγκων*, in anatomy, the gibbous eminence, or flexure of the cubit, the middle of the eminence on which we lean, being the greateſt of the two apophyſes of the ulna, and the ſame with the olecranon. See the article OLECRANUM.

ANCONA, a ſea-port town of Italy, ſituated on the gulph of Venice, in eaſt longitude 15°. and north latitude 43°. 20′. It is the capital of a marquiſate of the ſame name, ſubject to the pope.

ANCONÆUS, in anatomy, the ſixth muſcle of the elbow; ſo called, as being ſituate behind the folds of the ancon.

It ariſes from the back part of the extremities of the humerus, paſſes over the elbow, and is inſerted into the lateral and internal part of the cubitus, about three or four fingers breadth above the olecranum. Its uſe is to aſſiſt in extending the arm.

ANCONES, in architecture, the corners, or coins of walls, croſs-beams, or rafters. Vitruvius calls the conſoles, which are a ſort of ſhouldering pieces, by the name ancones.

ANCONY, in mineralogy, denotes a bloom of iron faſhioned into a flat bar, about three feet long, with a ſquare rough knot at each end.

The proceſs for bringing the iron to this ſtate is this: they firſt melt off a piece from a ſow of caſt iron, of the proper ſize; this they firſt hammer at the forge into a maſs of two feet long, and of a ſquare ſhape, which they call a bloom; when this is done, they ſend it to the finery, where, after two or three heats and workings, they bring it to this figure, and call it an ancony. The middle part beat out at the finery is about three feet long, and of the ſhape and thickneſs the whole is to be, this is then ſent to the chafery, and there the ends are wrought to the ſhape of the middle, and the whole made into a bar.

ANCYLE, *ανκυλη*, in antiquity, a kind of ſhield which fell, as was pretended, from heaven in the reign of Numa Pompilius. At which time likewiſe a voice was heard, declaring that Rome ſhould be miſtreſs of the world as long as ſhe ſhould preſerve this holy buckler.

Authors are much divided about its ſhape: however it was kept with great care in the temple of Mars, under the direction of twelve prieſts, and leſt any ſhould attempt to ſteal it, eleven others were made ſo like as not to be diſtinguiſhed from the ſacred one. Theſe ancylia were carried in proceſſion every year round the city of Rome.

ANCYLE, in ſurgery, a diſtortion of the joints, cauſed by a ſettlement of the humours, or a diſtention of the nerves; in which caſe remedies of a mollifying and relaxing nature are required. See the article JOINT.

ANCYLOGLOSSUM, *αγκυλογλωσσον*, among phyſicians, denotes a contraction of the ligaments of the tongue, hindering ſpeech. This happens, either when the membrane which ſupports the tongue is naturally imperfect or of too hard a ſubſtance, or is occaſioned by a preceding ulcer, and a hard cicatrix left under the tongue. It is to be cured only by manual operation by the ſurgeon.

The effect of the ancyloglosſum is not only to hinder the uſe of ſpeech, but in children it alſo diſables them from ſucking.

The cure is performed by a careful ſection of the frænum, ſo as not to hurt the nerves, or other veſſels.

This operation is never to be performed, where the infant is able to thruſt its tongue ſtraight out of the mouth.

Fabricius ab Aquapendente complains ſeverely on the officiouſneſs of midwives, who, without ever examining the condition of the frænum, practiſe the operation promiſcuouſly on all infants, from an opinion, that without it the child would never be able to ſpeak. But, according to this author, there is ſcarce one child in 100,000 in whom this ligament needs any cutting at all.

ANCYLOMELE, a ſurgeon's crooked probe. See the article PROBE.

ANCYLOSIS, *αγκυλωσις*, in ſurgery, the the ſame with ancyle. See ANCYLE.

ANCYROIDES, *αγκυροειδης*, among anatomiſts, the ſame with what is called coracoides. See the article CORACOIDES.

ANDABATÆ, *ανδαβαται*, in antiquity, a ſort of gladiators, who mounted on horſeback, or in chariots, fought hoodwinked, having a helmet that covered their eyes.

ANDALUSIA, the moſt ſouth-weſt province of Spain, having Eſtremadura and new Caſtile on the north; and Granada, the ſtraits of Gibraltar, and the Atlantic ocean on the ſouth.

New ANDALUSIA, a province of Terra Firma, in ſouth America, lying on the coaſt of the Atlantic ocean, oppoſite to the leeward iſlands, having the river Oroonoco on the weſt.

ANDAMAN, the name of ſome ſmall iſlands, ſituated on the eaſt ſide of the entrance

trance of the bay of Bengal, in east longitude 92°. and north latitude 15°.

ANDENES, an island in the north sea, upon the coast of Norway. It is only inhabited by fishermen.

ANDERLECHT, a fortress of the austrian Netherlands, about two miles south of Brussels.

ANDERNACHT, a city of Germany, situated on the lower Rhine, in east longitude 7°. and north latitude 50°. 25'. about thirty miles south of Cologn.

ANDERO, a sea-port town of Spain, in the province of Biscay, about sixty miles west of Bisboa, situated in west longitude 4°. 30'. and north latitude 43°. 20'. Here the Spaniards build and lay up some of their men of war.

ANDES, a vast ridge of mountains, which runs almost the whole length of south America. They are esteemed the highest in the world, being covered with snow in the warmest climates, and from thence called the Sierras Nevada, or the snowy mountains.

ANDEUSE, a city of Languedoc, in France, situated in east longitude 3°. 40'. and north latitude 43°. 45'.

ANDOVER, a large market-town in Hampshire, situated about ten miles north-west of Winchester, in west longitude 1°. 30'. and north latitude 51°. 20'. It sends two members to parliament.

ANDRACHNE, in botany, a genus of the monoecia gynandria class of plants; the corolla of the male flower is formed of five emarginated slender petals, shorter than the cup; the female flower has no corolla; the fruit is a capsule containing three cells, with two obtuse trigonal seeds, roundish on one side, and angular on the other.

ANDREW, *or knights of* ST. ANDREW, an order of knights more usually called the order of the thistle. See the article THISTLE.

Knights of St. Andrew is also an order instituted by Peter the great of Muscovy, in 1698; the badge of which is a golden medal, on one side whereof is represented St. Andrew's cross, and on the other are these words: *Czar Pierre monarque de tout la Russie.*

This medal, being fastened to a blue ribbon, is suspended from the right shoulder.

St. ANDREW'S CROSS, in heraldry, is a cross in form of the letter X. See the article CROSS.

St. ANDREW'S-DAY, a festival of the christian church, celebrated on the thirtieth of November, in honour of the apostle St. Andrew.

St. ANDREW'S, in geography, a city in the county of Fife in Scotland, situated on the german ocean, in west longitude 2°. 25'. and north lat. 56°. 20'. about thirty miles north-east of Edinburgh.

St. Andrews was formerly an archbishop's see, but at present is chiefly remarkable on account of its university.

St. ANDREW'S is also the name of a town of Carinthia in Germany, situated in east long. 15°. and north latit. 47°. about a hundred miles south of Vienna.

ANDRIA, ἀνδρεία, in grecian antiquity, public entertainments first instituted by Minos of Crete, and, after his example, appointed by Lycurgus, at Sparta, at which a whole city, or a tribe, assisted. They were managed with the utmost frugality, and persons of all ages were admitted, the younger sort being obliged by the law-giver, to repair thither as to schools of temperance and sobriety.

ANDRIA, in geography, a city of Italy, in the kingdom of Naples, situated in east longitude 17°. and north latitude 41°. 6'. It is a bishop's see.

ANDROGYNOUS, ἀνδρογυνος, in zoology, an appellation given to animals, which have both the male and female sex in the same individual. These are otherwise called hermaphrodites. See HERMAPHRODITE.

ANDROIDES, ἀνδροειδης, in mechanics, a human figure, which by certain springs, performs several external functions of a man. See the article AUTOMATON.

ANDROLEPSY, ἀνδροληψια, in grecian antiquity, an action allowed by the Athenians, against such as protected persons guilty of murder. The relations of the deceased were empowered to seize three men in the city or house, whither the malefactor had fled, till he were either surrendered, or satisfaction made some other way for the murder.

ANDROMACHUS's TREACLE, *andromachi theriaca*, in pharmacy, &c. See the article THERIACA.

ANDROMEDA, in astronomy, a small northern constellation, consisting of twenty-seven stars, visible to the naked eye; behind Pegasus, Cassiopeia, and Perseus. See the article PEGASUS, &c.

ANDROMEDA, in botany, a genus of the decandria monogynia class of plants; the calyx of which is a very small acute coloured and permanent perianthium, cut into five segments; the corolla consists of a single petal, of an oval form, inflated

and

and quinquefid; the fruit is a roundiſh capſule, containing five cells, in which are ſeveral roundiſh ſhining ſeeds.

ANDRON, ἀνδρων, in grecian antiquity, denotes the apartment in houſes, deſigned for the uſe of men; in which ſenſe, it ſtands oppoſed to gynæceum. See the article GYNÆCEUM.

ANDRONION, among antient phyſicians, a name given to troches invented by Andron.—They were made of baluſtines, birthwort, plumoſe alum, vitriol, myrrh, aloes, frankincenſe; and were reckoned good for deterging the calloſities of ulcers.

ANDROPOGON, in botany, a genus of the polygamia monoecia claſs of plants, the calyx of which is a bivalve oblong, obtuſe glume; the corolla is alſo a bivalve glume, ſmaller and thinner than the cup; there is no pericarpium; the ſeed, which is ſingle, oblong, covered and armed with the ariſta of the flower, is included in the glumes of the calyx and corolla.

ANDROS, an iſland in the Archipelago, near the ſouth end of Negropont.

ANDROSACE, in botany, a diſtinct genus of plants, the flower of which conſiſts of one ſaucer-like petal, very wide at the mouth, and divided into five ſegments; and its fruit is a globoſe, unilocular capſule, containing a number of ſmall oval or roundiſh ſeeds, affixed to a placenta. See plate XVIII. fig. 1.

This genus, which belongs to the pentandria monogynia claſs of Linnæus, takes its name from the relief it gives mankind; being aperitive, and good in the gout, dropſy, and retention of urine.

ANDROTOMY, or ANDRANATOMY, the diſſection of a human body, in contradiſtinction to zootomy. See ZOOTOMY.

ANDRYALA, in botany, a genus of the ſyngeneſia polygamia æqualis claſs of plants, the common calyx of which is ſhort, multifid, round and hairy: the compound flower is imbricated and uniform, with numerous and equal hermaphrodite corollulæ; the proper flower is monopetalous, ligulated, linear, truncated, and divided into five ſegments: there is no pericarpium; and the ſeed, which is ſingle, oval, and crowned with down, has no other cover but the cup.

ANDUXAR, a city of Andaluſia in Spain, ſituated on the river Guadalquiver, about thirty-two miles eaſt of Corduba, in weſt long. 4°. and north latit. 37°. 50′.

ANECDOTE, ἀνεκδοτον in matters of literature, ſome fact relating to hiſtory, not formerly publiſhed to the world, or generally known.

Anecdotes have ſomething in them very alluring, eſpecially when they regard perſons of diſtinction: ſuch is the inſatiable thirſt of mankind after knowledge! However, it is proper to remark, that few of the many pieces publiſhed under the title of anecdotes, truly deſerve that name, as being filled with a multitude of facts and circumſtances to be found in other writers.

ANECDOTES, *anecdota*, is alſo a name given to the works of the antients, which have never been publiſhed in print.

ANEE, in commerce, a meaſure for grain, uſed in ſome provinces of France.

Anee at Lyons, ſignifies alſo a certain quantity of wine, which is the load an aſs can carry at once.

That load is fixed at eighty engliſh quarts wine meaſure.

ANEGADA, one of the Caribbee iſlands, ſituated in weſt longitude 63°. 5′. and north latitude 18°.

ANELE, or ANIL, in our old ſtatutes, names uſed for indigo. See INDIGO.

ANEMIUS, among chemiſts, an appellation given to a wind furnace uſed in making fierce fires for melting and diſtillation.

ANEMOMETER, among mechanical philoſophers, an inſtrument contrived for meaſuring the ſtrength of the wind. There are various kinds of anemometers: that of which Wolfius gives the ſtructure, is moved by ſails like thoſe of a windmill. He experienced, he ſays, the goodneſs of it, and affirms that the inward ſtructure may be preſerved to meaſure even the force of running water, or that of men and horſes when they draw. In the memoirs of the academy of ſciences is deſcribed a new anemometer, which expreſſes on paper, not only the ſeveral winds that have blown during the ſpace of twenty-four hours, but alſo the ſtrength and velocity of each. For the deſcription, conſtruction, and repreſentation of an anemometer, See the article VELOCITY and force of the WIND.

ANEMONE, WIND-FLOWER, in botany, the name of a diſtinct genus of plants. See the article WIND-FLOWER.

ANEMOSCOPE, according to Vitruvius's deſcription, a machine ſhewing from what point of the compaſs the wind blows. Such is that at Buckingham-houſe, in London. See the article WIND.

This

This is done by means of an index moving about an upright circular plate, the index being turned by an horizontal axis, and the axis by an upright ſtaff, at the top of which is the ſane moved about by the wind.

Anemoſcope denotes alſo an inſtrument invented to foretell the changes of the wind. Otto Guerick gave this name to a machine he invented, conſiſting of a little wooden man, which by riſing and falling in a glaſs tube, ſhewed the change of the weather. But it has been diſcovered, that this was only an application of the common barometer. See BAROMETER.

ANETHUM, DILL, in botany. See the article DILL.

ANEURISM, or ANEURYSM, in ſurgery, a throbbing tumour, diſtended with blood, and formed by a dilatation or rupture of an artery.

Surgeons uſually diſtinguiſh two kinds, the true and the ſpurious. A true aneuriſm has always a pulſation more or leſs, and is formed by a dilatation only of the artery either all round, or on one ſide of it.

The ſpurious aneuriſm is when the artery being opened by a puncture, wound, eroſion, or other external violence, extravaſates the blood betwixt the muſcles and integuments, the limb being thereby rendered livid and ſwelled. A true aneuriſm may likewiſe degenerate into one that is ſpurious, by a gradual dilatation of the artery, till by the burſting of the coats, the blood is either extravaſated, or diſcharged freely from the wound.

Aneuriſms may be alſo diſtinguiſhed, from the ſituation of the arteries, into external and internal; the firſt affecting ſome external, the other an internal artery. Though aneuriſms moſt frequently happen in the brachial artery, yet the diſorder is not reſtrained to that part alone; for they may ariſe from an infinite number of caſes, both external and internal, in all parts, where there are any arterial trunks or conſiderable branches diſtributed.

The cure of aneuriſms differs according to their kind. A ſmall one of the true ſpecies may be removed by diligation; that is, by a compreſs and bandage, or by an inſtrument adapted for the purpoſe. But if that method ſhould not ſucceed, recourſe muſt be had in this, as in large and ſpurious aneuriſms, to inciſion.

ANGARIA, in roman antiquity, a kind of public ſervice, impoſed on the provincials, which conſiſted in providing horſes and carriages for the conveyance of military ſtores, and other public burdens.

ANGARIA is ſometimes alſo uſed for a guard of ſoldiers, poſted for the defence of a place.

ANGARIA, in a more general ſenſe, is uſed for any kind of oppreſſion, or ſervices, performed through compulſion.

ANGEIOGRAPHY, or ANGEIOLOGY, among anatomiſts, the deſcription and hiſtory of the ſeveral veſſels of the human body, as the arteries, veins, nerves, lymphatics, &c. See ARTERY, VEIN, &c.

ANGEIOGRAPHY, among antiquarians, denotes the deſcription of the various utenſils, weights, meaſures, &c. of the antients.

ANGEL, a name given to thoſe ſpiritual, intelligent beings, who are ſuppoſed to execute the will of God, in the government of the world.

The exiſtence of angels has been admitted in all religions. The Greeks and Latins acknowledged them under the name of genii or demons; and in the alcoran, we find frequent mention of them, the mahommedans aſſigning them different orders and degrees, and different employments both in heaven and earth. Though among the Jews in general, the exiſtence of angels was believed (the Sadduces only excepted, who denied the exiſtence of all ſpirits whatever, but God) yet they do not ſeem to have known the names of any angel before the babyloniſh captivity. Tobit, who is thought to have lived at Nineveh ſome time before that event, is the firſt who has called an angel by his name. He mentions Raphael; and Daniel, who lived ſometime after Tobit, has taught us the names of Michael and Gabriel. As to the nature of angels, authors are not ſo unanimous as about their exiſtence. The moſt univerſal opinion is, that they are of a ſpiritual, incorporeal nature; yet many of the old fathers imagined them to be corporeal, and capable of ſenſual pleaſures. Nor are they better agreed concerning the time when angels were created. Some think that they were created at the ſame time as the heavens; the Hebrews conjecture that God created them upon the ſecond day of the world; and finally, others have aſſerted, that they exiſted long before the ſenſible world.

As to their office or employment, ſome are ſaid to preſide over empires, nations, provinces, cities, and particular perſons. Theſe

These latter are ſtiled guardian angels. Thus Michael is acknowledged to be the protector of the people of Iſrael; and in the New Teſtament, we read of ſaint Peter's angel who ſet him at liberty; and Jeſus Chriſt enjoins us not to deſpiſe little ones, becauſe their angels continually behold the face of God.

The number of angels is no where mentioned in ſcripture; but it is always repreſented as immenſely great, and alſo that there is a ſubordination among them. Hence eccleſiaſtical writers make an hierarchy of nine orders of angels. See the article HIERARCHY.

But beſides theſe, we read of evil angels, the miniſters of God's wrath; as the deſtroying angel, the angel of death, the angel of Satan, and the angel of the bottomleſs pit. Thus God ſmote Senacherib's army with the ſword of the deſtroying angel; he ſlew David's ſubjects with the ſword of the angel of death; and the angel of Satan buffetted St. Paul. The angel of the bottomleſs pit is the prince of devils, the ſame with the deſtroying angel. In general, good and bad angels are diſtinguiſhed by the oppoſite terms of angels of light, and angels of darkneſs.

And to conclude, thoſe angels that kept not their firſt eſtate, but fell from their obedience into ſin, for which they were expelled the regions of light, and caſt down into hell, to be reſerved in everlaſting chains under darkneſs, until the judgment of the great day, are called fallen angels.

ANGEL is likewiſe a title given to biſhops of ſeveral churches. In this ſenſe is St. Paul underſtood by ſome authors, where he ſays women ought to be covered in the church, becauſe of the angels; and thus in the Revelations, *the ſeven ſtars are the angels*, that is, biſhops *of the ſeven churches*.

ANGEL, in commerce, the name of an antient gold coin in England, of which ſome are ſtill to be ſeen in the cabinets of the curious. It had its name from the figure of an angel repreſented upon it. It was 23 ¾ carats fine, and weighed four penny-weights. Its value differed in different reigns.

The French have alſo had their angels; but they are now out of uſe.

ANGEL-FISH, in ichthyology, a name by which ſome call the ſqualus, with no pinna ani, and the mouth ſituated in the top of the head. See SQUALUS.

ANGELIC, or ANGELICAL, in a general ſenſe, an epithet given to whatever belongs to, or partakes of the nature of angels. See the article ANGEL.

ANGELIC is alſo a denomination figuratively given to ſeveral things, on account of their ſuperior excellence. Thus we read of an angelic life, angelic poem, angelic pills, &c.

ANGELIC-HABIT. See the article HABIT.

ANGELICA, in botany, a genus of the pentandria digynia claſs of plants, the general umbel of which is roundiſh and multiple; the partial umbel, while in flower, is perfectly globoſe; the general involucrum is compoſed of either three or five leaves; the partial involucrum is ſmall, and compoſed of eight leaves; the proper perianthium is ſmall, and quinquedentate; the general corolla is uniform; the ſingle flowers conſiſt each of five deciduous, lanceolated, and ſlightly crooked petals; the fruit is naked, roundiſh, angular, and ſeparable into two parts: the ſeeds are two, of an oval figure, plain on one ſide, and convex or ſtriated on the other.

Angelica is a ſimple much eſteemed for its medicinal virtues, being reputed ſtomachic, cordial, alexipharmic, and of great uſe in peſtilential fevers, in all contagious diſtempers, and the plague itſelf. But the virtues aſcribed to it on this account, are ſomewhat too great. At preſent it is regarded little otherwiſe than as a carminative. It has been made an ingredient in many of our officinal compoſitions. The ſtalks make a very pleaſant ſweetmeat preſerved with ſugar, which is a very good way of taking angelica on many occaſions.

Berry-bearing ANGELICA, *Aralia*. See the article ARALIA.

ANGELICA, in grecian antiquity, a celebrated dance performed at their feaſts; ſo called, becauſe the dancers were dreſſed in the habit of meſſengers.

ANGELICS, *angelici*, in church hiſtory, an antient ſect of heretics, ſuppoſed by ſome to have got this appellation from their exceſſive veneration of angels, and by others from their maintaining that the world was created by angels.

ANGELICS, *angelici*, is alſo the name of an order of knights, inſtituted in 1191, by Angelus Flavius Comnenus, emperor of Conſtantinople.

Some will have this order, which ſtill ſubſiſts in Italy, to have been much more antient, making Conſtantine its founder.

ANGELO, or St. ANGELO, a ſea-port town of Apulia in Naples, ſituated on the gulph of Venice, in 16° 25′ eaſt longitude, and 41° 20′ north latitude.

This is alſo the name of two other ſmall towns in Italy, one ſituated in the kingdom of Naples, and the other in the province of Urbino.

ANGELOS, a fine city of Mexico, ſituated in 103° weſt longitude, and 19° north latitude, about ſeventy-five miles ſouth-eaſt of the city of Mexico.

ANGELOT, in the hiſtory of coins, a gold coin ſtruck at Paris, while ſubject to the Engliſh, ſo called from the repreſentation of an angel ſupporting the arms of England and France.

ANGER, *ira*, among moral philoſophers, denotes a violent paſſion, or propenſity, to take vengeance on the authors of ſome ſuppoſed injury done to the angry perſon. Mr. Hutcheſon, having defined anger, a propenſity to occaſion evil to another, ariſing upon apprehenſion of an injury done by him, obſerves, that this violent propenſity is attended generally, when the injury is not very ſudden, with ſorrow for the injury ſuſtained, or threatened, and deſire of repelling it, and making the author of it repent of his attempt, or repair the damage.

But beſides theſe conditions, which are good, in ſome ſort intended by men when they are calm, as well as during the paſſion, there is in the angry perſon a propenſity to occaſion miſery to the offender, a determination to violence, even where there is no intention of any good to be obtained or evil avoided by this violence. And it is principally this propenſity which we denote by the name anger, though other deſires often accompany it.

Anger in ſcripture is often attributed to God, not that he is capable of thoſe irregular motions which this paſſion produces, but becauſe he puniſhes the wicked with the ſeverity of a provoked father.

ANGERMANIA, a maritime province of Sweden, lying on the weſtern ſhore of the Bothnic gulph.

ANGERMUND, a town of the dutchy of Berg in Germany, ſituated on the eaſt ſide of the Rhine in 6° 20′ eaſt longitude, and 51° 10′ north latitude. It lies about nine miles north of Duſſeldorp, and is ſubject to the elector palatine.

ANGERONALIA, in antiquity, feaſts celebrated at Rome in honour of Angerona, the goddeſs of ſilence and patience. They were inſtituted, according to Macrobius, in conſequence of a vow, when the people were afflicted with the quinzy, *angina*. They were held on the twenty-firſt of December.

ANGERS, a large city of France, capital of the province of Anjou, and ſituated on the river Loire, in 30′ weſt longitude, and 47° 30′ north latitude. It is a biſhop's ſee, and has a royal academy for the ſtudy of the law chiefly.

ANGHIERA, a town of the Milaneſe in Italy, ſituated on the eaſt ſide of the Laco Maggiore, about forty miles weſt of Milan, in 9° eaſt longitude and 45° 40′ north latitude.

ANGINA, in medicine, a violent inflammation of the throat, otherwiſe called quinzy. See the article QUINZY.

ANGIOSPERMIA, in the linnæan ſyſtem of botany, denotes thoſe plants of the *didynamia* claſs, which have their ſeeds incloſed in a capſule, or ſeed-veſſel. See the article DIDYNAMIA.

The angioſpermia are diſtinguiſhed from the gymnoſpermia, which have them ſo; becauſe the angioſpermia have them encloſed in a capſule, and adhering to a placenta placed in the middle of that capſule. The claſs of didynamia contains the labiated and perſonated plants. The angioſpermia are the perſonated, the others the labiated kinds. See the article GYMNOSPERMIA.

ANGLE, *angulus*, in geometry, the inclination of two lines meeting one another in a point, and called the legs of the angle. Thus A B C (plate XVIII. fig. 2. N°. 1.) is the angle made by the two lines A B, B C meeting in the point B, which is the vertex of the angle.

Angles are either rectilineal, or right-lined, as A B C, above referred to; or curvilineal, as D E F (fig. 2. N°. 2); or, laſtly, formed of a ſtrait line and a curve one, and thence called mixed, as H I G, *ibid.* N°. 3.

Angles are of great uſe in almoſt every branch of mathematics. They make one half the ſubject of trigonometry, and have much to do in geography, aſtronomy, &c.

Rectilineal angles, according to the greater or leſſer degree of inclination, are either right, acute, or obtuſe.

Right ANGLE, is that formed between two lines, one of which ſtands upright, or perpendicularly, on the other, inclining no more one way than it does the other: ſuch is the angle E B C; (*ibid.* N°. 4.); for if B C be produced to D, E B will be

BRITISH MUSEUM

Fig. 1. ANDROSACE.



Fig. 2. ANGLES.

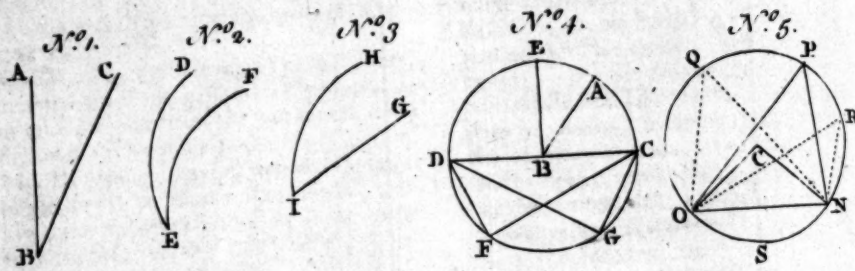


Fig. 3. ANHIMA.



Fig. 4. ANHINGA.



Fig. 5. ANONIS, or *REST-HARROW.*



T. Jefferys sculp.

be found to ſtand upright on DC, or to incline neither way. A right angle is ſaid to be an angle of ninety degrees, becauſe meaſured by a quadrant of a circle, or $\frac{360}{4}=90$; ſo that a right angle, or an angle of ninety degrees, is the ſame thing.

Acute ANGLE, one whoſe vertex is acute, or ſharp, being always leſs than a right angle: ſuch is the angle ABC, *ibid.*

Obtuſe ANGLE, one with a blunt or obtuſe vertex, as ABD, which is always greater than a right angle, *ibid.*

Angles likewiſe receive other denominations from their different poſitions, and the relation they bear to the figures they are in, and to the lines which form them. Hence,

ANGLES *in a ſemi-circle*, thoſe ſubtended by the diameter of that circle, as DFC, DGC, (*ibid.*) which are always right angles.

ANGLE *at the center*, that formed by two radii, or ſemi-diameters of a circle, as OCN, *ibid.* N°. 5.

ANGLE *at the circumference*, or *in a ſegment*, that formed by two chords of a circle meeting at the circumference: ſuch is OPN, (*ibid.*) which is only half of the angle at the center OCN, ſubtended by the ſame chord ON; or, which comes to the ſame thing, it is equal to half the arc OSN. Moreover, all angles in the ſame ſegment, and conſequently ſubtended by the ſame chord ON, as OQN, OPN, ORN, are equal to one another.

ANGLE *of a ſemi-circle*, that formed by a diameter and the circumference of a circle, as BAO, (*ibid.* N°. 6) which is leſs than a right angle, and yet greater than any rectilineal acute one.

ANGLE *of a ſegment*, that which a chord in a circle makes with the tangent at the point of contact: ſuch are the angles EDC, FDC: the former being the angle of the greater ſegment, and the latter of the leſſer ſegment, *ibid.*

ANGLE *of contact*, that which the tangent of a circle forms with its circumference, as EDA, (*ibid.*) which is leſs than any right-lined angle.

ANGLES are ſaid to be adjacent or contiguous, which have one leg common to both, as DGI and DGE, (*ibid.* N°. 7.) which taken both together are equal to two right angles.

Oppoſite, or *vertical* ANGLES, thoſe formed by two lines croſſing each other, as the angles DGI, EGF, (*ibid.*) which are always equal.

An angle is alſo ſaid to be oppoſite to the ſide that ſubtends it: thus GHF is to the ſide oppoſite GF.

Again, when one of the ſides of a triangle is produced, as from F to K, (*ibid.*) the external angle GFK, is equal to the two internal angles FGH and FHG, which are ſaid to be oppoſite to it.

Alternate ANGLES, the internal pairs of acute or obtuſe angles, formed by a right line DL cutting two parallel right lines IE, HK (*ibid.*): ſuch are EGF and GFH, both acute and equal; alſo the obtuſe ones IGF and GFK, likewiſe equal.

Plain ANGLE. See the article PLAIN.

Spherical ANGLE, that formed by the interſection of two great circles of the ſphere.

Solid ANGLE, that formed by the meeting of three or more plain angles, not being in the ſame plain, in one point: ſuch is the angle of a dye, of a ſquare box, or the like.

In regard to ſolid angles, it has been demonſtrated, that the plain angles forming them, are always leſs than three hundred and ſixty degrees, or four right angles.

For the other properties and appellations of angles, when combined in triangles, ſquares, polygons, circles, &c. ſee the articles TRIANGLE, SQUARE, &c.

For the ſines, tangents, and ſecants of angles, ſee the articles SINE, TANGENT, and SECANT.

And, laſtly, for the various denominations of angles, peculiar to different branches of mixt mathematics, as navigation, fortification, optics, mechanics, aſtronomy, &c. ſee the articles NAVIGATION, FORTIFICATION, &c.

ANGLE *of incidence*. See INCIDENCE.

ANGLE *of reflection*. See REFLECTION.

ANGLE *of refraction*. See REFRACTION.

ANGLE *of viſion*. See VISION.

ANGLES *of the eye*, in anatomy, the ſame with the corners of the eye, called by anatomiſts *canthi*. See CANTHI.

ANGLER, a perſon who practiſes the art of angling, whether as a diverſion, or otherwiſe. See the article ANGLING.

The tackle neceſſary for an angler is various, according to the branch of the art he applies himſelf to. He muſt be equipt with variety of hooks, and a competent quantity of every ſort; he muſt not be

without wax, ſilk, and a pair of ſciſſars or pen-knife, a baſket, or bag, and landing-net, plummets, ſhot, and floats of every kind, needles and thread, lines, hair, indian graſs, variety of feathers, more particularly thoſe taken from the neck of a mallard, the wing of a partridge, a capon's neck, the top of a plover, or the hackle of a red cock. He muſt likewiſe be furniſhed with twiſt, and bedding for dubbing his artificial flies; he muſt have a landing-hook, reels for his ſilk lines, a pouch or book for his hair lines, a convenient place wherein to repoſite his ſmall craft, *viz.* flies, hooks, wax, ſhot, ſilk, *&c.* a bag for his worms, a tin box for his gentles.

When he takes his ſtand, he is to ſhelter himſelf under ſome buſh, or tree, or ſtand ſo far from the brink of the river that he can only diſcern his float; by reaſon fiſh are timorous, and eaſily frighted. The beſt way of angling with the fly is down the river, and not up; neither need the angler ever make above half a dozen of trials in one place, either with fly or ground bait, when he angles for trout: by that time the fiſh will either offer to take, or refuſe the bait and not ſtir at all.

The angling rod muſt be kept in a moderate ſtate, neither too dry nor too moiſt, in the firſt caſe it will be brittle, in the other rotten. When paſtes are uſed, it is proper to mix a little tow with them, and rub them over with honey; finally, a ſmall anointing them with butter is of great uſe to keep them from waſhing off the hook. The eyes of any fiſh that is taken are an excellent bait, for almoſt any other kind of fiſh.

ANGLESEY, an iſland and county of north Wales, which ſends one member to parliament.

ANGLICANÆ GUTTÆ, ENGLISH DROPS, in chemical pharmacy. See the article DROPS.

ANGLICANUS *ſudor*, among phyſicians. See the article SUDOR.

ANGLICISM, in matters of ſtile, a manner of ſpeech peculiar to the Engliſh language. See ENGLISH and LANGUAGE.

ANGLING, among ſportſmen, the art of fiſhing with a rod, to which are fitted a line, hook, and bait. See ANGLER.

In angling the following rules are to be obſerved. 1. To place yourſelf ſo that your ſhadow do not at any time lie upon the water if ſhallow. 2. To angle in a pond near the ford where the cattle go to drink, and in rivers, in ſuch places as the fiſh you intend to angle for, uſually frequent; as for breams, in the deepeſt water; for eels, under banks; for chub, in deep ſhaded holes; for pearch, in ſcowrs; for roach, in the ſame places; for trouts, in quick ſtreams.

The beſt times for angling are from April to October; for in cold ſtormy weather, or bleak eaſterly winds, the fiſh will not bite. The time of the day, in the warm months, is in the morning, about nine o'clock, and in the afternoon, between three and four. In order to attract the fiſh to the place intended for angling, it will be proper once in four or five days to caſt in ſome corn boiled ſoft, garbage, worms choped to pieces, or grains ſteeped in blood, and dried; and if you fiſh in a ſtream, it will be beſt to caſt in the grains above the hook.

The beſt way of angling with the fly is down the river; and in order to make the fiſh bite freely, be ſure to uſe ſuch baits as you know they are naturally inclined to, and in ſuch manner as they are accuſtomed to receive them.

The ſeveral methods of angling for ſalmon, trout, carp, tench, pearch, pike, dace, gudgeons, roach, flounder, *&c.* may be ſeen under the articles *Salmon* FISHING, *Trout* FISHING, *&c.*

ANGLO-SAXON, an appellation given to the language ſpoken by the Engliſh Saxons, in contradiſtinction from the true Saxon, as well as from the modern Engliſh. See SAXON and ENGLISH.

ANGOL, a city of Chili, in ſouth America, ſituated in 78° weſt longitude, and 38° ſouth latitude.

ANGOLA, a large maritime country on the ſouth-weſt ſide of Africa, lying between 10° and 15° eaſt longitude, and 5° and 16° ſouth latitude.

The Portugueſe have ſeveral colonies and conſiderable ſettlements on this coaſt, which does not hinder the other nations of Europe from driving a traffic in ſlaves with the natives, who are all negroes.

ANGON, in the antient military art, a kind of javelin uſed by the French. They darted it a conſiderable diſtance. The iron head of this weapon reſembled a flower-de-luce. It is the opinion of ſome writers, that the arms of France are not flowers-de-luce, but the iron point of the angon, or javelin of the antient French.

ANGOULESME, a city of France, ſituated about ſixty-four miles ſouth-eaſt of Rochelle, in 10° eaſt longitude, and 45° 40′

40′ north latitude. It is the capital of Angoumois. See the next article.

ANGOUMOIS, a province of France, bounded by Poictou on the north, by Limoſin on the eaſt, by Perigord on the ſouth, and by Santoin on the weſt.

ANGOURA, or ANCYRA, a large populous city of Natolia, in aſiatic Turky, ſituated on the river Melus: eaſt longitude 33°, north latitude 41° 5′.

ANGRA, the principal town of the iſland of Tercera, one of the Azores. See the articles AZORES.

ANGROGNA, a town of Piedmont, ſituated about ſeven miles weſt of Pignerol: eaſt longitude 7°, north longitude 44° 45′.

ANGUILLA, in ichthyology, the name by which zoologiſts call the eel. See EEL.

ANGUILLA, in geography, one of the Caribbee-iſlands, ſubject to Great Britain, and ſituated in weſt longitude 63°, and north latitude 18° 15′.

ANGUINEAL, denotes ſomething belonging to or reſembling a ſnake, *anguis*. Hence we ſay, anguineal curve, hyperbola, verſe, &c. See the articles CURVE, HYPERBOLA, &c.

ANGUINUM OVUM, among antient naturaliſts, a fabulous kind of egg, ſaid to be produced by the ſaliva of a cluſter of ſerpents, and poſſeſſed of certain magical virtues.

ANGUIS, in zoology, a genus of amphibious animals, with a round body, covered over with ſcales, without any ſcuta. This genus comprehends the *vipera*, *cæcilia*, *aſpis*, *natrix*, *caudiſona*, *cobra*, *cenchris*, *hydrus*, and *anguis æſculapii*. See the articles VIPER, CÆCILIA, &c.

ANGULAR, in a general ſenſe, denotes ſomething relating to, or that hath angles. See the article ANGLE.

ANGULAR CAPITAL, ANGULAR COLUMN, ANGULAR MOTION, ANGULAR NICHE, ANGULAR SECTION, are to CAPITAL, COLUMN, MOTION, NICHE, SECTION.

ANGUS, a ſhire or county of Scotland, bounded on the north by the ſhire of Merns; on the eaſt, by the german ocean; on the ſouth, by the frith of Tay, which divides it from the ſhire of Fife; and on the weſt, by the ſhire of Perth. This county, which for the moſt part is exceeding fertile, is otherwiſe called Forfarſhire, from its capital Forfar.

ANGUSTICLAVIA, in roman antiquity, a tunica embroidered with little purple ſtuds, according to moſt antiquarians; but Rubennius pretends that it was an oblong band of purple woven in the tunica, reſembling a nail. It was worn by the roman knights, as the laticlavia was by the ſenators.

ANHALT, a province of the circle of upper Saxony, in Germany, lying ſouthward of the dutchy of Magdeburg.

ANHELATIO, or ANHELITUS, among phyſicians, a ſhortneſs of breath which happens to ſound perſons, but eſpecially to valetudinarians, after violent exerciſe. See the article ASTHMA.

ANHIMA, in ornithology, a braſilian bird, reſembling in ſome degree a crane; from which, however, as well as from all other birds, it is diſtinguiſhed by a ſlender horn of a bony ſubſtance, inſerted a little above the origin of its beak; its wings too have each a horn of this kind, growing out of the fore-part of the bone. It is longer than a ſwan, and mottled with black, grey, and white, with a very little yellow in ſome places. See plate XVIII. fig. 3.

ANHINGA, in ornithology, an extremely beautiful water-fowl of the Braſils, about the ſize of our common duck. Its beak is about three fingers breadth long, and has a row of hooked prickles both above and below; its neck is ſlender and long; its head and neck are yellowiſh; the upper part of the back is brown, ſpotted with yellow; and the breaſt, belly, and thighs, are of a ſilvery white. See plate XVIII. fig. 4.

ANIAN, a large maritime country on the eaſtern coaſt of Africa, lying between the equator and 12° north latitude, and between 40° and 50° eaſt longitude.

ANIAN is alſo the name of a ſtrait, ſuppoſed to lie between the north eaſt of Aſia, and north-weſt of America.

ANJENGO, a ſmall town and factory on the malabar-coaſt, belonging to our eaſt-india company.

ANIMA, among divines and naturaliſts, denotes the ſoul, or principle of life, in animals. See the article SOUL.

ANIMA, in a leſs proper ſenſe, is uſed for the principle of vegetation in plants. See the article VEGETATION.

ANIMA, among chemiſts, denotes the volatile or ſpirituous part of bodies.

ANIMA, among phyſicians, a term ſometimes given to highly refined medicines, or ſuch as are poſſeſſed of an extraordinary virtue. Thus, we read of *anima rhubarbari*, *anima pulmonum*, &c. the former denoting an extract of rhubarb, and the latter ſaffron, on account of its ſuppoſed

poſed efficacy in diſorders of the lungs. Thus alſo,

ANIMA *hepatis*, is a name by which ſome call *ſal martis*, or ſalt of iron, on account of its efficacy in diſeaſes of the liver.

ANIMA *articulorum*, an appellation given to hermodactyls, as being good in diſorders of the joints. See the article HERMODACTYLS.

ANIMA *ſaturni*, a white powder obtained by pouring diſtilled vinegar on litharge, of conſiderable uſe in enamelling. See the article ENAMEL.

ANIMA *mundi*, i. e. *ſoul of the univerſe*, is by ſome defined to be a certain, pure, ætherial ſubſtance, which being diffuſed through the maſs of the world, informs, actuates, and unites the divers parts of it into one great, perfect, organical body.

The *anima mundi* of the modern platoniſts, is an ætherial ſpirit which exiſts pure in the heavens, but pervading elementary bodies on earth, aſſumes ſomething of their nature, and thence becomes of a peculiar kind.

Others define it to be an ignific virtue infuſed into the chaos, and diſſeminated through the whole frame for the conſervation, nutrition, and vivification of it.

The *anima mundi* is rejected by moſt of the modern philoſophers, although many of them ſubſtitute ſomething very much like it. Thus the carteſians have their ſubtile matter; ſome later philoſophers have admitted fire; and others, an elaſtic ſpirit or medium diffuſed through all the parts of ſpace.

ANIMADVERSION, in matters of literature, is uſed to ſignify, ſometimes correction, ſometimes remarks, upon a book, *&c.* and ſometimes a ſerious conſideration upon any point.

ANIMAL, in natural hiſtory, an organized and living body, which is alſo endowed with ſenſation: thus, minerals are ſaid to grow or increaſe, plants to grow and live, but animals alone to have ſenſation.

The deſcription, hiſtory, and claſſing of animals, make not only a conſiderable, but the moſt excellent part, of natural hiſtory, known by the name of zoology. See the article ZOOLOGY.

Different authors have eſtabliſhed different diviſions or families of animals; but the moſt natural one ſeems to be into quadrupeds, birds, fiſhes, amphibious animals, inſects, and animalcules, viſible only by the help of a microſcope. See the articles QUADRUPED, BIRD, *&c.*

Generation of ANIMALS. See the article GENERATION.

ANIMALS, in heraldry, are much uſed, both as bearings and ſupporters.

It is to be obſerved, that in blazoning animals muſt be interpreted in the beſt ſenſe, and ſo as to redound to the greateſt honour of the bearers. For example, the fox being renowned for wit, and likewiſe given to filching for his prey; if this be the charge of an eſcutcheon, we muſt conceive the quality repreſented to be his wit, and not his theft. All beaſts muſt be figured in their moſt noble action; as a lion rampant, a leopard, or wolf paſſant, a horſe running or vaulting, a greyhound courſing, a deer tripping, and a lamb going with a ſmooth pace. In like manner, every animal muſt be moving and looking to the right ſide of the ſhield, the right foot being placed foremoſt. Theſe are the precepts given by Guillim, and yet we find that there are lions paſſant, couchant, and dormant, as well as rampant. See the articles RAMPANT, PASSANT, *&c.*

ANIMAL, uſed adjectively, denotes any thing belonging to, or partaking of, the nature of animals. Thus,

ANIMAL ACTIONS, thoſe that are peculiar to animals. Such are ſenſation and muſcular motion. See SENSATION, *&c.*

ANIMAL LIQUORS, a name given to the various fluids found in animal bodies, as blood, lymph, *&c.*

ANIMAL MOTION, the ſame with what is called muſcular motion. See the article MOTION.

ANIMAL SECRETION, the ſeparation of the ſeveral juices of the body from the blood. See the article SECRETION.

ANIMAL SPIRITS, a very fine ſubtile juice in animal bodies, ſuppoſed to preſide over the animal actions.

Thoſe who maintain the exiſtence of animal ſpirits, for that is a point not yet determined, imagine them to be ſeparated in the brain from the ſubtileſt parts of the blood, and conveyed from thence by the nerves to all parts of the body, for the performance of every animal function.

Upon this precarious hypotheſis, which, however, is of great antiquity, many elaborate theories have been formed; but anatomiſts are ſo little agreed, touching the nature of thoſe ſpirits, that it is by no means ſafe to lay any ſtreſs upon them, in accounting for diſtempers, or inveſtigating remedies.

ANIMAL SYSTEM denotes the whole claſs of

of beings endowed with animal life, otherwiſe called animal kingdom.

ANIMAL OECONOMY. See OECONOMY.

ANIMAL OIL. See the article OIL.

ANIMALCULE, an animal ſo minute in its ſize, as not to be the immediate object of our ſenſes.

Animalcules are ſeen only by the aſſiſtance of microſcopes, and are vaſtly more numerous than any other part of the animal creation; but the ſpecies, on a cloſe examination, are found to be extremely few, in proportion to the number of individuals. The moſt obvious diſtinction among them is, that ſome have, and others have not tails; and that ſome have, and others have not viſible limbs. According therefore to theſe characters, they are arranged by Dr. Hill under three claſſes, diſtinguiſhed by the names of gymnia, cercaria, arthronia; the firſt containing thoſe which have no viſible limbs, nor any tail; the ſecond, thoſe which have tails; the third, thoſe which have viſible limbs.

Animalcules are diſcovered by the microſcope in moſt liquors, as water, wine, vinegar, *&c.* in ſeveral chalybeat waters, in oats, barley, *&c.* and in the puſtules of the itch.

Naturaliſts have many ſpeculations concerning the origin, the multiplication, and propagation of animalcules; whether, *e. gr.* it be by putrefaction or by copulation, and the ordinary intercourſe of the two ſexes; concerning the mechaniſm of animalcules, the ſtructure of their eyes, their different orders and œconomy, their number, minuteneſs, food, office, uſe, *&c.*

Some will have animalcules the cauſe of all diſeaſes, particularly the itch, the plague, *&c.* Others aſſign them a nobler uſe, and ſuppoſe them intended to animate and enliven all nature, to be the principle of life, motion, generation, and the firſt ſtamina or rudiments of man himſelf. Thus ſome have aſſerted, that the animalcules, found in the male ſperm of animals, were the future animals in miniature, and that by theſe generation was performed. See the article GENERATION of *Animals*.

As to the origin and propagation of animalcules, we find naturaliſts extremely at a loſs, and therefore advancing conjectures and hypotheſes, each more chimerical than the other. The ſyſtem of putrefaction ſolves the difficulty quickly: but the ſuppoſition is unphiloſophical, and contrary to obſervation and analogy. Yet how ſuch vaſt numbers of animals can be, as it were at pleaſure produced, without having recourſe to ſomething like equivocal generation, is very difficult to ſay! To produce a million of living creatures in a few hours, by only expoſing a little water in a window, or by adding to it a few grains of ſome ſeed, or leaves of a plant, ſeems difficult to believe. We therefore muſt ſuppoſe them to have been pre-exiſtent.

Huygens imagines, that the animalcules in pepper or ginger water come thither out of the air, attracted by the ſpicy ſmell. But can we ſuppoſe that the effluvia of aromatic bodies, groſs enough to affect our olfactory organs, can produce the like ſenſations in creatures many millions of times leſs than us? Ought not the odorous particles which affect them, to be proportional to their own ſize? Each corpuſcle of the effluvia, *e. gr.* of pepper, may be many degrees bigger than the whole body of one of our animalcules; and inſtead of entring its noſtrils, muſt knock it down, or even bury it under its load.

Harris is rather of opinion, that the eggs of ſome exceeding ſmall inſects, which are very numerous, may have been laid or lodged in the *plicæ* or *rugæ* of the coats of the grain, by ſome kinds that inhabit thoſe ſeeds, as their proper places. For that inſects of the larger kinds do frequently thus depoſite their eggs, on the flowers and leaves of plants, is often experimented; and it is probable that the ſmaller or microſcopical inſects do the ſame. Now theſe being waſhed out of the ſeeds by their immerſion in water, may riſe to the ſurface, and there be hatched into theſe animals which we ſee ſo plentifully to abound there. Or, the ſurface of the water may arreſt the ſtraggling eggs of ſome microſcopical inſects, which before floated in the air, and being prepared for this purpoſe by the infuſion of proper grain, or a due degree of heat, may compoſe ſo proper a nidus for them, that by the ſun's warmth they may eaſily be hatched into living creatures, which may afterwards turn into flies of the ſame ſpecies with the animal parent.

But this is not enough, M. Malezieu has diſcovered ſome animalcules to be viviparous, and others oviparous. And Lewenhoeck and others pretend to have ſeen them in the very act of copulation. Others aſſure us they have ſeen eggs in the

the bodies of ſome animalcules which are tranſparent; and that in others, eggs have appeared placed on the outſide of the body; from which M. Malezieu and M. Tobelot have obſerved young ones to iſſue alive, of the ſame kind and form with their ſires and dams.

Indeed, conſidering the great variety of ſpecies of animalcules, it is not probable they ſhould all propagate in the ſame manner. Mr. Harris obſerved a ſort of green belts on ſome that were found in the ſcum of puddle water; and on further obſervation found theſe belts compoſed of globules, ſo like the roes or ſpawn of fiſhes, that he could not but fancy they ſerved for the ſame uſe. After April he found many of them without any thing of the green belt; others with it very much, and that unequally, diminiſhed, and the water filled with a vaſt number of ſmall animals; which before he ſaw not there, and which he now looked on as the young animated fry, which the old ones had ſhed.

With regard to their ſtructure and œconomy, animalcules are found of divers ſorts; ſome formed like fiſhes, others reptile, others hexapedal; ſome horned; *&c.* In ſeveral kinds, however ſmall, 'tis eaſy to diſcover the form of their mouths, their proboſcides, horns, *&c.* the motions of their hearts, lungs, and other parts. In ſome of the animalcules obſerved by Lewenhoeck, he computed that three or four hundred of the ſmalleſt, placed contiguous to each other in a line, would only equal the diameter of an ordinary grain of ſand. Now multiply 300 cubically, and the produce is 27,000,000 of animals, equal to one grain of ſand, ſo that a cubical inch would contain 13,824,000,000,000, or almoſt 14 millions of millions.

The contemplation of animalcules has made the ideas of infinitely ſmall bodies extremely familiar to us. A mite was antiently thought the limit of littleneſs; but we are not now ſurprized to be told of animals twenty ſeven millions of times ſmaller than a mite. For ſuch is the enormouſly little ſize of a kind of microſcopical animalcule obſerved by M. Malezieu, as he proves by a geometrical calculation of the augmentation which his glaſs makes. Hartſoeker has carried the matter farther. If the ſyſtem of generation be true, which ſuppoſes that all animals were formed from the beginning of the world, and incloſed one within another, and all of them in the firſt animals of each ſpecies, how minute muſt the animalcules now produced have been at the beginning! It appears by calculation, that the ſpawn of the firſt fiſh muſt have been to that of the laſt, as unity followed by thirty or forty thouſand cyphers, is to unity.

Naturaliſts ſuppoſe another ſpecies or order of inviſible animalcules, *viz.* ſuch as eſcape the cognizance even of the beſt microſcopes, and give many probable conjectures in relation to them. Reaſon and analogy give ſome ſupport to the exiſtence of infinite imperceptible animalcules. The naked eye, ſay ſome, takes in from the elephant to the mite; but there commences a new order reſerved only for the microſcope, which comprehends all theſe from the mite, to thoſe twenty-ſeven millions of times ſmaller; and this order cannot be yet ſaid to be exhauſted, if the microſcope be not arrived at its laſt perfection: and when it is arrived there, ſhall we then have attained the whole ſyſtem of animals? It is nowiſe probable that the limits of nature ſhould coincide exactly with the limits of our eye-ſight, when aſſiſted by the microſcope. Who knows, ſays another, but the ſmalleſt and moſt imperceptible animals themſelves have others leſs bred and nouriſhed by them, and which bear the ſame proportion to them, that thoſe bear to the animals they are produced on.

ANIMATED, or ANIMATE, in a general ſenſe, denotes ſomething endowed with animal life. See ANIMAL.

ANIMATED alſo imports a thing to be impregnated with vermin, or animalcules; in which ſenſe, all terreſtrial bodies whatever may be ſaid to be animated. See the article ANIMALCULE.

ANIMATED MERCURY, a term uſed by Mr. Boyle to denote mercury which being impregnated with ſpirituous particles, may grow hot when mingled with gold.

ANIMATED NEEDLE, is one touched with a loadſtone. See NEEDLE and MAGNET.

ANIMATED POWER, in mechanics, denotes a man, or other animal, in oppoſition to weights, *&c.*

ANIMATION ſignifies the informing an animal body with a ſoul. Thus the fœtus in the womb is ſaid to come to its animation, when it begins to act like a true animal, or after the female, that bears it, is quick. See the article FOETUS.

ANIMATION is alſo uſed figuratively, for the

the act of giving life and energy to a discourse.

ANIME, or GUM ANIMÆ, in natural history and pharmacy, a kind of gum, or rather resin, being a friable substance, inflammable, and soluble in oil. There are two kinds, the oriental and occidental: the oriental is a dry resin, brought in large casks, and of a very uncertain colour, some being greenish, some reddish, and some of the colour of myrrh.

The occidental is a yellowish white, resembling frankincense in colour. Both kinds are used in perfumes; and in medicine externally, for cold flatulent affections of the head, nerves, and joints; palsies, contractions, contusions, &c.

ANIMÉ, in heraldry, a term used when the eyes of any rapacious creature are borne of a different tincture from the creature itself. We also say, incensed of such or such a tincture.

ANIMI DILIQUIUM, fainting, or swooning, in medicine. See the articles LIPOTHYMIA and SWOONING.

ANINGA, in commerce, a root which grows in the Antilles islands, and is pretty much like the china plant. It is used by sugar bakers, for refining the sugar, and is more effectual and less dangerous than the sublimate of mercury and arsenic.

ANJOU, a county, or rather earldom of France, bounded by the province of Maine on the north, by Tourain on the east, by Poictou on the south, and by Britany on the west.

ANISCALPTOR, in anatomy, a name by which some call the *latissimus dorsi*. See the article LATISSIMUS.

ANISE, *anisum*, in the materia medica, a small seed, of an oblong shape, ending each way in an obtuse point, with a surface very deeply striated, and of a lax and brittle substance.

The plant which produces it is a species of the cuminum of Linnæus. See the article CUMINUM.

The best seed is what is fresh, full, free from mouldiness, and has a very strong smell. It is of a hot nature, good to expel wind out of the bowels and stomach, and is used by the confectioners in sugar-plums, of various denominations. There is extracted by distillation from anise-seed, an oil, which, as well as that expressed from it when bruised, answers all the purposes of the seed itself; and during the distillation, there comes off a water called anise-seed water, which is a celebrated cordial and carminative.

ANKER, a liquid-measure at Amsterdam. It contains about thirty-two gallons english measure.

ANNA, in geography, a city of Arabia Petrea, situated on the western shore of the river Euphrates, in 41°. 35′ of east longit. and 33° 30′ north lat.

ANNALS, *annales*, in matters of literature, a species of history, which relates events in the chronological order wherein they happened. They differ from perfect history in this, that annals are a bare relation of what passes every year, as a journal is of what passes every day; whereas history relates not only the transactions themselves, but also the causes, motives, and springs of actions. Annals require nothing but brevity, history demands ornament. Cicero informs us of the origin of annals: to preserve the memory of events, the *pontifex maximus*, says he, wrote what passed each year, and exposed it on tablets in his own house, where every one was at liberty to read: this they called *annales maximi*; and hence the writers who imitated this simple method of narrating facts were called *annalists*.

ANNAMABOE, an english factory on the gold-coast, in Guinea, in Africa.

ANNAND, the capital of the shire of Annandale, in Scotland, situated upon a river of the same name, in 3° west longit. and 54° 40′ north latitude.

ANNAPOLIS, the capital of Maryland, a british colony in north America, in 78° west longit. and 39° 25′ north lat.

ANNATES, among ecclesiastical writers, a year's income of a spiritual living.

These were, in antient times, given to the pope throughout all christendom, upon the decease of any bishop, abbot, or parish-clerk, and were paid by his successor. In England, the pope claimed them first of such foreigners as he conferred benefices upon, by way of provision; but afterwards they were demanded of all other clerks on their admission to benefices. At the reformation they were taken from the pope, and vested in the king; and finally, queen Anne restored them to the church, by appropriating them to the augmentation of poor livings.

ANNEALING, or NEALING, the burning or baking glass, earthen-ware, &c. in an oven or furnace.

ANNEALING *of glass*, ANNEALING *of iron*, ANNEALING *of steel*, } See { GLASS. IRON. STEEL.

ANNECY, a town of the duchy of Savoy, situated

ſituated upon a lake of the ſame name, ſubject to the king of Sardinia; in 6° 10′ eaſt longitude, and 46° north latitude.

ANNEXATION, in law, a term uſed to imply the uniting of lands or rents to the crown.

ANNIHILATION, the act of reducing any created being into nothing.

Annihilation ſtands oppoſed to creation, and both are the works of omnipotence; for bodies naturally admit of changes and alterations in their forms, but not of annihilation.

It is objected againſt this notion of annihilation, that it requires an act; whereas, according to the opinion of ſome philoſophers, annihilation muſt enſue upon God's merely ceaſing to act.

Annihilation, in a moral ſenſe, is ſometimes uſed: thus, the capital of the ſouth-ſea is reduced to one half; and unleſs great care be taken, the male-practices of brokers will ſoon render another annihilation neceſſary.

ANNIS COMMUNIBUS. See the article COMMUNIBUS ANNIS.

ANNIVERSARY, the annual return of any remarkable day.

Anniverſary days, in old times, more particularly denoted thoſe days in which an office was performed for the ſouls of the deceaſed, or the martyrdom of the ſaints was celebrated in the church.

ANNO DOMINI, *i. e.* the year of our lord, the computation or time from our ſaviour's incarnation. The engliſh is now inſerted in the dates of all our deeds.

ANNOISANCE, in law, the ſame with nuſance. See the article NUSANCE.

ANNOMINATION, in rhetoric, the ſame with what is otherwiſe called *paronomaſia*. See the article PARONOMASIA.

ANNONA, in roman antiquity, denotes proviſion for a year of all ſorts, as of fleſh, wine, &c. but eſpecially of corn.

Annona is likewiſe the allowance of oil, ſalt, bread, fleſh, corn, wine, hay, and ſtraw, which was annually provided by contractors for the maintenance of an army.

ANNONÆ PRÆFECTUS, in antiquity, an extraordinary magiſtrate, whoſe buſineſs it was to prevent a ſcarcity of proviſion, and to regulate the weight and fineneſs of bread.

ANNOTATION, in matters of literature, a brief commentary, or remark upon a book or writing, in order to clear up ſome paſſage, or draw ſome concluſion from it: thus the critics of the laſt age have made learned annotations upon all the claſſics.

ANNOTATION, among phyſicians, the beginning of a febrile paroxyſm, when the patients uſed to ſhiver, to yawn, ſtretch, and be drowſy.

Annotation is alſo proper to hectic fevers, and happens when the patient, an hour or two after eating, feels an increaſe of heat, with a ſwifter pulſe, but without any of the forementioned ſymptoms.

ANNUAL, in a general ſenſe, an appellation given to whatever returns every year, or is always performed within that ſpace of time: thus we ſay, the annual motion of the earth, annual plants, &c. See the article EARTH, &c.

ANNUAL EQUATION, in aſtronomy. See the article EQUATION.

ANNUAL, or ANNUEL, in the ſcottiſh law, any yearly revenue, or rent, payable at the two great terms, Whitſuntide and Martinmas.

ANNUITY, a yearly income ariſing from money, &c. and either paid for a term of years, or upon a life.

Annuities are ſaid to be in arrears, when they are due either yearly or half yearly, and are unpaid for any number of payments. If, therefore, the amount of annuities in arrear, at ſimple intereſt, be wanted, let a be the annuity, r the rate of one pound *per annum*, m the amount thereof, and n the number of years; then a being the firſt year's amount, $a + 1\,a\,r$ will be the amount of the ſecond year, $a + 2\,a\,r$ of the third, and $a + \overline{n-1} \times a\,r$ will be the n year's amount: wherefore m, the ſum of thoſe amounts, will be equal to $na + \frac{nn-n}{2}\,ar$. So that when any of theſe four quantities $m\,n\,a\,r$ are given, the value of the fourth may be eaſily found, as in the following table:

Prob.	given	required	Solution.
1	$a\ n\ r$	m	$= na + \frac{nn-n}{2} \times ar$
2	$m\ n\ r$	a	$= \frac{2m}{2 + nr - r \times n}$
3	$n\ a\ r$	m	$= \frac{m - na \times 2}{n - 1 \times na}$
4	$m\ r\ a$	n	$= z + \frac{zz + 8\,mr}{2\,ra}\,\frac{1}{2}$

Suppoſing $2a - ra = z$

But if the intereſt be compound, and

$x =$

$x = 1 + r$ be equal to the principal and intereſt of one pound, at any given rate, then any three of the four quantities $a\ m\ n\ x$ being given, the fourth will be found as under:

Prob.	Given	required.	Solution.
1	$a\ x\ n$	m	$= \frac{x^n - 1 \times a}{x - 1}$
2	$m\ x\ n$	a	$= \frac{x - 1 \times m}{x^n - 1}$
3	$m\ x\ a$	n	$= \frac{\mathrm{L}\, x - 1 \times m + a - \mathrm{L}\, a}{\mathrm{L}\, x}$
4	$m\ a\ n$	x	$= -x^n + \frac{m}{a}x = \frac{m - a}{a}$

L being the logarithm of $x - 1$ and a.

If the diſcount in buying and ſelling annuities at ſimple intereſt be wanted: then ſince the amount of one pound for any time is to one pound as the amount of an annuity is to its preſent value, that is, as $1 + nr : 1 :: na + \frac{nn-n}{2}ar : \frac{na + \frac{1}{2}nn - n \times ar}{1 + nr} = s$. Therefore,

$$a = \frac{2 + 2nr \times s}{2 + nr - r \times n}$$

$$r = \frac{na - s \times 2}{2s - an + a \times n}$$; and ſuppoſing $2sr + ra - 2a = z$.

$$n = \frac{z + zz + 8sar}{2ra}$$

But when it is compound intereſt:

s will be equal $a - \frac{a}{x^n} \div x - 1$

$$a = \frac{x^n \times x - 1 \times s}{x^n - 1}$$

$$n = \frac{\mathrm{L}\, a - \mathrm{L}\, a + s - sx}{\mathrm{L}\, x}$$

$x = \frac{a}{s}$. And if n be ſuppoſed to be infinite, a being the annual rent, s will be equal to $sx - a$. If then it is required to find how many years purchaſe, at compound intereſt, any annuity is worth, n will be equal to $\frac{1}{x - 1}$, and $x = \frac{n - 1}{n}$

As to the doctrine of annuities upon lives, founded upon bills of mortality, ſee Dr. Halley's Diſcourſe in the Philoſophical Tranſactions, De Moivre's treatiſe, and the article LIFE.

There are ſeveral differences in law between an annuity and a rent; every rent is iſſuing out of lands, but an annuity charges only the granter, his heirs, &c. alſo no action lies for an annuity but the writ of annuity; but for the recovery of rent, the ſame remedy lies as for lands.

ANNULAR, in a general ſenſe, ſomething in the form of, or reſembling, a ring. Hence,

ANNULAR, in anatomy, is an appellation given to ſeveral parts of the body: thus, the annular cartilage is the ſecond cartilage of the larynx; annular ligament, that which encompaſſes the wriſt, and binds the bones of the arm together; annular proceſs, or protuberance, a part of the medulla oblongata. See the articles CARTILAGE, LIGAMENT, &c.

ANNULAR is alſo a peculiar denomination of the fourth finger commonly called the ring-finger.

ANNULET, in architecture, a ſmall ſquare member in the doric capital, under the quarter-round.

Annulet is alſo a narrow flat moulding, which is common to divers places of the columns, as in the baſes, capitals, &c. It is the ſame member which Vitruvius calls a fillet; Palladio, a liſtel or cincture; Scamozzi and Mr. Brown, a ſupercilium, liſt, tinea, eye-brow, ſquare, and rabbit.

ANNULET, in heraldry, a mark of diſtinction which the fifth brother of a family ought to bear in his coat of arms.

The hieroglyphic of the annulet is very various: ſome of the antients uſed it to denote ſervitude; the romans repreſented by it liberty and nobility. It is an emblem of ſecrecy, if it have a ſeal; and of love, if the cypher, the face, or the arms of the perſon beloved are engraved upon it.

ANNULLING, a term ſometimes uſed for cancelling, or making void, a deed, ſentence, or the like.

ANNUNCIADA, ANNUNTIADA, or ANNUNTIATA, an order of knighthood in Savoy, firſt inſtituted by Amadeus I. in the year 1409; their collar was of fifteen

links, interwoven one with another, in form of a true lover's knot, and the motto F. E. R. T. ſignifying *fortitudo ejus Rhodum tenuit*. Amadeus VIII. gave the name annunciada to this order, which was formerly known by that of the knot of love, changing, at the ſame time, the image of St. Maurice, patron of Savoy, which hung at the collar, for that of the Virgin Mary; and inſtead of the motto abovementioned, ſubſtituting the words of the angel's ſalutation.

ANNUNCIADA is alſo the title of ſeveral religious orders, inſtituted at different times, and at different places, in honour of the annunciation. See the next article.

ANNUNCIATION, the tidings brought by the angel Gabriel to the Virgin Mary, of the incarnation of Chriſt.

Annunciation is alſo a feſtival, kept by the church on the 25th of March, in commemoration of theſe tidings: it is of very great antiquity.

In the romiſh church, on this feaſt the pope performs the ceremony of marrying or cloyſtering a certain number of maidens, who are preſented to him in the church della Minerva, cloathed in white ſerge, and muffled up from head to foot: an officer ſtands by, with purſes containing notes of fifty crowns for thoſe who make choice of marriage, and notes of an hundred for thoſe who chooſe the veil.

Annunciation is likewiſe a title given by the Jews to part of the ceremony of their paſſover.

ANODYNE, in pharmacy, a term applied to medicines which mitigate pain.

Anodynes are of two kinds; the firſt proper, called alſo paregorics; the ſecond improper, becauſe they rather ſtupify than alleviate, and are known by the name of hypnotics and narcotics. See the article HYPNOTICS, *&c.*

Among anodynes may be reckoned all relaxing remedies, diluters, and medicines, which, by any means, deſtroy acrimony, or expel wind, together with the compound medicines of the ſhops, which paſs under this name; ſuch is the anodyne balſam made of caſtile ſoap, opium, camphire, ſaffron, and ſpirit of wine, accounted excellent in allaying the tortures of the gout, and in obſtructions of the urinary paſſages.

ANOMALISTICAL YEAR, in aſtronomy, the time that the earth takes to paſs through her orbit; it is alſo called the periodical year.

The ſpace of time belonging to this year is greater than the tropical year, on account of the preceſſion of the equinoxes. See the article PRECESSION.

ANOMALOUS, in a general ſenſe, is applied to whatever is irregular, or deviates from the rule obſerved by other things of the like nature.

ANOMALOUS VERBS, in grammar, ſuch as are not conjugated conformably to the paradigm of their conjugation: they are found in all languages; in latin the verb *lego* is the paradigm of the third conjugation, and runs thus, *lego, legis, legit*; by the ſame rule it ſhould be *fero, feris, ferit*, but we ſay *fero, fers; fert*; *fero* then is an anomalous verb. In engliſh the irregularity relates often to the preter tenſe, and paſſive participle; for example, *give*, were it formed according to rule, would make *gived* in the preter tenſe, and paſſive participle; whereas, in the former, it makes *gave*, and in the latter *given*.

ANOMALY, in grammar, that quality in words which renders them anomalous. See the preceding article.

ANOMALY, in aſtronomy, an irregularity in the motion of the planets, whereby they deviate from the aphelion or apogee; which inequality is either mean, excentric, or coequate and true.

Mean ANOMALY, in the old aſtronomy, is the diſtance of a planet from the line of the apſes, according to its mean motion: thus, if E S D (plate XIX. fig. 1. n°. 1.) be the ſun's orbit, A M N B the ecliptic, the earth at T, the ſun at S, and A B the line of the nodes; then is the angle A T M, or the arch A M, the ſun's mean anomaly.

But, in the new aſtronomy, where a planet, at P, deſcribes an eliplis A P B A (ibid. n°. 2.) about the ſun, ſituated in the focus S, the mean anomaly is the arch, or angle, or trilinear area A S P, contained under the line of the apſes A B (*viz.* the tranſverſe axis) and the line S P, which is proportional to the time. Again, drawing Q P H perpendicular to A B, and S F perpendicular to the radius Q C, continued, the mean anomaly will be repreſented by the trilinear circular area A Q S, or by the arch A Q + S F; as is demonſtrated by aſtronomers.

Excentric ANOMALY, in the new aſtronomy, is an arch A Q of the excentric circle A Q B, terminated by A B, and by the line Q H, drawn through the centre

centre of the planet P, perpendicular to A B.

Coequate or true ANOMALY is the distance of the sun from its *apogæum*, or of a planet from its *aphelium*, where it is seen from the sun; that is, it is the angle A S P at the sun, under which the planet's distance from the *aphelium* appears. For a farther account of anomaly, consult Gregory, Keil, *&c.*

ANOMOEANS, in church-history, antient heretics, who asserted, that the Son was of a nature different from, and in nothing like to, that of the Father. This was the name by which the pure arians were distinguished, in contradistinction to the semi-arians, who acknowledged a likeness of nature in the Son, at the same time that they denied, with the pure arians, the consubstantiality of the word. The semi-arians condemned the anomœans in the council of Seleucia; and the anomœans in their turn condemned the semi-arians in the council of Constantinople.

ANOMORHOMBOIDIA, in natural history, a genus of crystalline spars, of no determinate form, easily fissile, but cleaving more readily in an horizontal than in a perpendicular direction, their plates being composed of irregular arrangements of short and thick rhomboidal concretions. See the article SPAR.

ANONA, in botany, a genus of plants, belonging to the *polyandria-polygynia* class of Linnæus: the perianthium is composed of three cordated, hollowed, and acuminated leaves: the corolla consists of six cordated sessile petals, three alternately interior and smaller: the stamina are scarce visible, but the antheræ are numerous: the fruit is a large berry, of an oval figure, covered with a squamose punctuated bark: the seeds are numerous, hard, of an oblong figure, and are placed circularly.

ANONIS, REST-HARROW, in botany, the name of Tournefort, for the Ononis of Linnæus. See the article ONONIS, and plate XVIII. fig. 5.

ANONYMOUS, something that is nameless, or of which the name is concealed. It is a term usually applied to books which do not express the author's name, or to authors whose names are unknown.

ANONYMOUS, in anatomy, an appellation given to parts newly discovered, and consequently without any proper names: thus the annular cartilage of the throat, known at present by the name *cricoides*, was formerly called anonymous.

ANOREXY, in medicine, a loathing of meat, or want of appetite.

An anorexy is occasioned either from an ill disposition of the stomach, or a redundancy of humours. The cure is different, according to the cause, both which are treated of under the article NAUSEA.

ANOUT, a small island in the Schagerrack, or that part of the sea of Denmark which has Norway on the north, Jutland on the west, Sweden on the east, and the isle of Zealand on the south; it lies in 13° east longit. and 56° 36′ north lat.

ANSÆ, in astronomy, the parts of saturn's ring, which are to be seen on each side of the planet, when viewed through a telescope, and the ring appears somewhat open. They are so called because they are like handles to the body of the planet. See the article SATURN.

ANSE, a small town of France, in the Lyonnois, four leagues north of Lyons.

ANSEL-WEIGHT, the same with auncel-weight. See the article AUNCEL.

ANSER, in the linnæan system of zoology, an order of birds, distinguished by having their beaks dentated in the manner of a saw, and the feet formed for swimming. Of this order we have the following genera, *viz.* 1. The pelican. 2. The anas, or duck-kind. 3. The mergus. 4. The alca. 5. The colymbus, or diver-kind. 6. The larus, or gull-kind, *&c.* See the articles PELICAN, ANAS, *&c.*

Anser is, more particularly, used for the common goose. See the article GOOSE.

ANSER, in astronomy, a star of the fifth or sixth magnitude, in the milky-way, between the swan and eagle.

ANSES, in astronomy, the same with *ansæ*. See the article ANSÆ.

ANSLO, a sea-port town of Norway, and province of Aggerhuys, situated in 10°. 12′ east long. and 59° 30′ north lat.

ANSPACH, or OHNSPACH, a city of Germany, and circle of Franconia, situated in 10° 36′ east longitude, and 49° 22′ north latitude.

It is the capital of the marquisate of Anspach, of which family was the late queen Caroline.

ANSPESSADES, in the French armies, a kind of inferior officer in the foot, below the corporals, but above the common centinels. There are usually four or five of them in a company.

ANSTRUTHER EASTER and WESTER, two

two royal burghs of Scotland, ſituated on the ſouth-eaſt coaſt of the county of Fife, in 2° 25′ weſt longitude, and 56° 20′ north latitude.

ANSWER, the reply made to a queſtion. To anſwer for a man, in a commercial ſenſe, ſignifies to be his ſurety.

ANSWER, in law. See REJOINDER.

ANT, *formica*, in zoology, a well known inſect, much celebrated for its induſtry and œconomy.

The ant makes a diſtinct genus of inſects, of the order of the *hymenoptera*, or thoſe with membranaceous wings; and is diſtinguiſhed from the other genera of this order, by having an erect ſquama, or ſcaly body, placed between the thorax and abdomen.

Ants are all furniſhed with four wings, excepting the mules, as they are called, or thoſe of no ſex, which have none at all. Of this genus we have the following ſpecies in England: 1. A ſmall blackiſh ant. 2. A ſmall reddiſh brown ant. 3. A middle-ſized black ant. 4. A middle-ſized reddiſh ant. 5. The great ant, or horſe ant, alſo known by the name of *hippomyrmex*.

ANT BEAR, in zoology. See the article MYRMECOPHAGA.

ANTA, in the antient architecture, a ſquare pilaſter, placed at the corners of buildings.

Anta is uſed by M. Le Clerc for a kind of ſhaft of a pillar, without baſe or capital, and even without any moulding.

ANTAGONIST, *antagoniſta*, denotes an adverſary, eſpecially in ſpeaking of combats and games.

ANTAGONIST MUSCLES, in anatomy, thoſe which have oppoſite functions, as flexors and extenſors, abductors, and adductors, &c.

ANATANACLASIS, in rhetoric, a figure which repeats the ſame word, but in a different ſenſe, as, *dum vivimus, vivamus*.

ANTARCTIC, in a general ſenſe, denotes ſomething oppoſite to the arctic, or northern pole. Hence

Antarctic circle, in geography and aſtronomy, is one of the leſſer circles of the ſphere, and diſtant only 23° 30′ from the ſouth pole, which is likewiſe called antarctic, for the ſame reaſon.

ANTARES, a ſtar of the firſt magnitude, otherwiſe called the ſcorpion's heart. See the article SCORPION.

ANTE', in heraldry, denotes that the pieces are let into one another in ſuch form as is there expreſſed, as, for inſtance, by dove-tails, rounds, ſwallows tails, or the like.

ANTEAMBULONES, in roman antiquity, ſervants who went before perſons of diſtinction, to clear the way before them. They uſed this formula, *Date locum domino meo*; *i. e.* make room, or way, for my maſter.

ANTECEDENT, in general, ſomething that goes before another, either in order of time or place.

ANTECEDENT DECREE, among ſchoolmen, is a decree preceding ſome other decree, or ſome action of man, or the proviſion of that action. It is much diſputed, whether predeſtination be a decree antecedent or ſubſequent to faith.

Antecedent will, or deſire, is that which in God precedes another will or deſire, or ſome knowledge or proviſion. But it is to be remarked, that theſe terms are applied to God only in reſpect to the order of nature, and not to an order of ſucceſſion.

ANTECEDENT, in grammar, the word to which a relative refers: thus, *God whom we adore*, the word *God* is the antecedent to the relative *whom*.

ANTECEDENT, in logic, is the firſt of the two propoſitions in an enthymema. See the article ENTHYMEME.

ANTECEDENT, in mathematics, is the firſt of two terms of a ratio, or that which is compared with the other, as in the ratio of 2 to 3, or *a* to *b*, 2 and *a* are each antecedents.

ANTECEDENT SIGNS, in medicine, ſuch as are obſerved before a diſtemper is ſo formed as to be reducible to any particular claſs, as a bad diſpoſition of the blood, which precedes an infinite number of diſeaſes.

ANTECEDENT TERM, in mathematics, the firſt one of any ratio: thus, if the ratio be *a* : *b*, *a* is the antecedent term.

ANTECEDENCE, *antecedentia*, in aſtronomy, an apparent motion of a planet towards the weſt, or contrary to the order of the ſigns, *viz.* from taurus towards aries, &c.

ANTECEDENCY, or ANTECEDENCE, in a general ſenſe, denotes the property or prerogative of being antecedent. See the article ANTECEDENT.

ANTECESSOR, one that goes before. It was an appellation given to thoſe who excelled in any ſcience: Juſtinian applied it

it particularly to profeſſors of civil law; and in the univerſities of France, the teachers of law take the title *anteceſſores* in all their theſes.

ANTECHAMBER, or ANTICHAMBER. See the article ANTICHAMBER.

ANTECHRIST. See the article ANTICHRIST.

ANTECURSORES, in the roman armies, a party of horſe detached before, partly to get intelligence, proviſions, &c. and partly to chuſe a proper place to encamp in. Theſe were otherwiſe called *anteceſſores*, and by the Greeks *prodromi*.

ANTEDATE, among lawyers, a ſpurious or falſe date, prior to the true date of a bond, bill, or the like. See DATE.

ANTEDILUVIAN, whatever exiſted before Noah's flood: thus, the generations from Adam to Noah are called the antediluvians. There are great diſputes among philoſophers about the form, conſtitution, figure, and ſituation of the antediluvian earth. Dr. Burnet contends that it was only a hollow cruſt, with an uniform equable ſurface, without mountains and without ſeas, and in all reſpects different from what we now find it to be. Dr. Woodward undertakes to prove that its appearance was the ſame as at preſent; that it had the ſame poſition in reſpect of the ſun, and conſequently the ſame viciſſitudes of ſeaſons: and Mr. Whiſton imagines, that the chaos, of which our earth was formed, had been the atmoſphere of a comet; that the annual motion of the earth began as ſoon as it aſſumed a new form; but that the diurnal motion did not take place till the fall of Adam; that before the deluge the year began at the autumnal equinox; that the orbit of the earth was a perfect circle: and that the ſolar and lunar years were the ſame, each conſiſting of juſt three hundred and ſixty days. The ſtate of the antediluvian philoſophy has likewiſe been the ſubject of much debate among authors.

ANTEGO, one of the Caribbee iſlands, in the Atlantic or American ocean, ſituated in 61° 30′ weſt longitude, and 17° 30′ north latitude. It is about twenty miles long, and as many broad.

ANTEJURAMENTUM, by our anceſtors called *juramentum calumniæ*, an oath which anciently both accuſer and accuſed were to take before any trial or purgation.

The accuſer was to ſwear that he would proſecute the criminal; and the accuſed to make oath, on the day he was to undergo the ordeal, that he was innocent of the crime charged againſt him.

ANTELOPE, in zoology, a ſpecies of goat, otherwiſe called *gazella*. See the article GAZELLA.

ANTENCLEMA, in rhetoric, called by the Latins *relatio*, is when the fault is imputed upon any misfortune happening, to the perſon to whom it happened: thus, Oreſtes blamed his mother, Horatius his ſiſter, and Milo blamed Clodius.

ANTENNÆ, in the hiſtory of inſects, ſlender bodies with which nature has furniſhed the heads of theſe creatures; being the ſame with what in engliſh are called horns, or feelers. See HORN.

ANTEPAGMENTA, in the antient architecture, the jambs of a door. They are alſo ornaments, or garniſhings, in carved work, of men, animals, &c. made either of wood or ſtone, and ſet on the architrave.

ANTEPENULTIMA, in grammar, the third ſyllable of a word from the end, or the laſt ſyllable but two. The Greeks put the acute accent upon the antepenultima; and the Latins, when the penultima is to be pronounced ſhort, put it upon the antepenultima, as in the word *dominus*.

ANTEPREDICAMENTS, among logicians, certain preliminary queſtions, which illuſtrate the doctrine of predicaments and categories. They are ſo called becauſe Ariſtotle has placed them before the predicaments, in order to treat that ſubject afterwards without interruption.

ANTEQUIERA, a town of Granada, in Spain; ſituated in weſt longitude 4°. 40′. and north latitude 36°. 40′. about twenty-five miles north of Malaga.

ANTERIOR, or ANTERIOUR, denotes ſomething placed before another, either with reſpect to time or place.

ANTESIGNANI, in the roman armies, ſoldiers placed before the ſtandards, in order to defend them, according to Lipſius; but Cæſar and Livy mention the antefignani as the firſt line, or firſt body, of heavy-armed troops. The velites, who uſed to ſkirmiſh before the army, were likewiſe called antefignani.

ANTESTATURE, in fortification, a ſmall retrenchment made of paliſadoes, or ſacks of earth, with a view to diſpute with an enemy the remainder of a piece of ground. This term is grown obſolete.

lete. See the article RETRENCHMENT.

ANTHELIX, in anatomy, the inward protuberance of the external ear, being a ſemicircle within, and almoſt parallel to the helix. See the article HELIX.

ANTHELMINTICS, among phyſicians, medicines proper to deſtroy worms. See the article WORMS.

ANTHEM, a church-ſong performed in cathedral ſervice by choriſters, who ſung alternately. It was uſed to denote both pſalms and hymns, when performed in this manner. But at preſent, anthem is uſed in a more confined ſenſe, being applied to certain paſſages taken out of the ſcriptures, and adapted to a particular ſolemnity.

ANTHEMIS, in botany, the name uſed by Linnæus for the chamæmile of other writers. See the article CHAMÆMILE.

This is alſo the name by which ſome writers call the buphthalmum or ox-eye. See the article BUPHTHALMUM.

ANTHERÆ, among botaniſts, denote the little roundiſh or oblong bodies, on the tops of the ſtamina of plants. See the article STAMINA.

The anthera is the principal part of the male organ of generation in plants, anſwering to the *glans penis* in animals. It is tumid and hollow, containing a fine powder called *farina fœcundans*. See PLANT, GENERATION, FARINA.

ANTHERICUM, in botany, the name by which Linnæus calls the phalangium of Tournefort. See PHALANGIUM.

ANTHESPHORIA, in antiquity, a ſicilian feſtival, inſtituted in honour of Proſerpine. Another ſolemnity of this kind ſeems to have been obſerved at Argos, in honour of Juno.

ANTHESTERIA, in grecian antiquity, feſtivals celebrated in the ſpring by the antient Athenians, in honour of Bacchus, during which the maſters feaſted their ſlaves, as the Romans did in the time of the Saturnalia. See SATURNALIA.

It was uſual, during theſe feaſts, to ride in chariots, and paſs jeſts upon all that paſſed by.

ANTHESTERION, in antient chronology, the ſixth month of the athenian year, anſwering to the latter part of our November, and beginning of December.

ANTHOCEROS, in botany, a genus of moſſes, without any flower-petals or ſtamina; inſtead of which there is a ſingle, very long and ſubulated anthera, ſpringing from the baſe of the cup. The female flower is ſometimes found on the ſame plant with this anthera; and ſometimes on a different one. It is monophyllous, divided into ſix patent ſegments, and commonly contains three roundiſh ſeeds lodged in its bottom.

ANTHOLOGION, the title of the ſervice book uſed in the greek church.

It is divided into twelve months, containing the offices ſung throughout the year, on the feſtivals of our ſaviour, the virgin, and other remarkable ſaints.

ANTHOLOGY, ἀνθολογία, a diſcourſe of flowers, or of beautiful paſſages from any authors.

ANTHOLOGY is alſo the name given to a collection of epigrams taken from ſeveral greek poets.

ANTHOLYZA, in the linnæan ſyſtem of botany, makes a diſtinct genus of plants, the flower of which conſiſts of one tubular petal; and its fruit is a roundiſh capſule, conſiſting of three valves, and divided into three cells, containing a number of triangular ſeeds.

This genus belongs to the *triandria monogynia* claſs, and is comprehended among the gladioli by other botaniſts.

ANTHONY, or *Knights of St.* ANTHONY, a military order, inſtituted by Albert duke of Bavaria, Holland, and Zealand, when he deſigned to make war againſt the Turks in 1382. The knights wore a collar of gold made in form of a hermit's girdle, from which hung a ſtick cut like a crutch, with a little bell, as they are repreſented in St. Anthony's pictures.

St. ANTHONY'S FIRE, a name ſometimes given to the eryſipelas. See ERYSIPELAS.

ANTHORISMUS, in rhetoric, denotes a contrary deſcription or definition of a thing, from that given by the adverſe party.

ANTHOSPERMUM, in botany, a genus of plants, by Pontedera called *tournefortia*, and belonging to the *polygamia dioecia* claſs of Linnæus.

It is male and female, in different plants, and ſome are hermaphrodites. The androgynous flower is of one leaf, with two piſtils and four ſtamina, with the germen below the flower. The male flowers are the ſame with theſe, wanting only the piſtils and germen. The female flowers have the piſtils and germen, but want the ſtamina. Pontedera deſcribes the fruit to be roundiſh, and full of corners, having eight oblong ſeeds, lying two and two together.

ANTHOANTHUM, in botany, a genus of plants, the flower of which is a bivalve glume.

glume. The ſtamina are two capillary filaments. The glume of the flower adheres afterwards to the ſeed which is ſingle, roundiſh, and pointed at each end.

This genus belongs to the *diandria digynia* claſs of Linnæus, and is the ſame with that which Mr. Ray calls *gramen vernum, ſpica brevi laxa*. It is the only graſs, ſo far as is yet known, which has only two ſtamina.

ANTHRACOSIS, ανθρακωσις, in medicine, a corroſive ſcaly ulcer, either on the bulb of the eye or the eye-lids.

ANTHRAX, ανθραξ, a greek term literally ſignifying a burning coal, uſed by the antients to denote a gem, as well as a diſeaſe, more generally known by the name of carbuncle. See CARBUNCLE.

Anthrax, is ſometimes alſo uſed for lithanthrax, or pit-coal. See the article LITHANTHRAX.

ANTHROPOGRAPHY, ανθρωπογραφια, denotes the deſcription of the human body, its parts, ſtructure, &c.

ANTHROPOLATRÆ, ανθρωπολατραι, in church hiſtory, an appellation given to the Neſtorians, on account of their worſhipping Chriſt, notwithſtanding that they believed him to be a mere man.

ANTHROPOLATRIA, the paying divine honours to a man, ſuppoſed to be the moſt antient kind of idolatry. See the article IDOLATRY.

ANTHROPOLOGY, ανθρωπολογια, a diſcourſe upon human nature. Thus Teichmeyer has given us a treatiſe of the animal œconomy, which is intitled anthropologia.

Anthropology, among divines, denotes that manner of expreſſion by which the inſpired writers attribute human parts and paſſions to God. As in Geneſis, God is ſaid to have repented of having made man.

Anthropology, in ſpeaking of God, is neceſſary to give us an idea of many things which otherwiſe we could not conceive.

ANTHROPOMANCY, ανθρωπομαντια, a ſpecies of divination, performed by inſpecting the intrails of a human creature.

ANTHROPOMORPHA, in the linnæan ſyſtem of zoology, a claſs of animals, reſembling in ſome degree the human form; the diſtinguiſhing characteriſtic of which is, that all the animals, comprehended in it, have four fore teeth in each jaw, and the teats are ſituated on the breaſt. Beſides the human ſpecies, which ſtands at the head of this claſs, it likewiſe comprehends the monkey and ſloath kinds.

ANTHROPOMORPHISM, among eccleſiaſtical writers, denotes the hereſy, or error of the anthropomorphites. See the next article.

ANTHROPOMORPHITES, in church-hiſtory, a ſect of antient heretics, who taking every thing ſpoken of God in the ſcripture in a literal ſenſe, particularly that paſſage of Geneſis, in which it is ſaid, *God made man after his own image*, maintained that God had a human ſhape. They are likewiſe called audeans, from Audeus their leader.

ANTHROPOMORPHOUS, an appellation given to whatever reſembles the human form; thus we meet with anthropomorphous plants, particularly mandrake; anthropomorphous animals, &c. See the articles ANTHROPOMORPHA, and MANDRAGORA.

ANTHROPOPATHY, a figure or expreſſion by which ſome paſſion is aſcribed to God, which properly belongs only to man. It differs from anthropology as the genus from the ſpecies; anthropology ſignifying any thing human attributed to God, but anthropopathy only human affections, paſſions, &c.

ANTHROPOSCOPY, ανθρωποσκοπια, that part of phyſiognomy which judges of a man's character, &c. from the lineaments of his body.

ANTHROPOPHAGY, ανθρωποφαγια, the act of eating human fleſh.

This cuſtom, barbarous as it is, can boaſt of great antiquity. Some authors trace its original as high as the deluge. The primitive chriſtians were accuſed of it by the heathens, who in all probability grounded the calumny on their miſunderſtanding what they had heard of the euchariſt and the communion. In the ſouthern part of Africa, and in ſome parts of America, this horrid practice is ſaid ſtill to prevail.

ANTHROPOTHYSIA, ανθρωποθυσια, the inhuman practice of offering ſacrifices of men or women.

The Anthropothyſia, whatever horror the idea of it may now excite, was a frequent practice among the antients. Some have imagined that the ſacrifice of Abraham was the firſt inſtance. Many reaſonings and diſquiſitions have been founded on this ſuppoſition; by which the ſeverity of Abraham's trial is thought by ſome to have been ſomewhat exaggerated. Human ſacrifices were in uſe among the Gentiles before that time; practiſed by

kings as well as by private perſons; nay by entire nations, as the Egyptians, Phœnicians, Canaanites, &c.

ANTHYLLIS, the BLADDER LOTUS, in botany, a genus of the *diadelphia-decandria* claſs of plants, the corolla whereof is papilionaceous; the fruit is a ſmall roundiſh legume, compoſed of two valves, and containing one or two ſeeds. This genus comprehends the vulneraria of Tournefort and others.

ANTI, ἀντὶ, a greek prepoſition, which enters into the compoſition of ſeveral words, both latin, french, and engliſh, in different ſenſes. Sometimes it ſignifies *before*, as in antichamber, and ſometimes oppoſite or contrary, as in the names of theſe medicines, antiſcorbutics, antivenereal, &c. See the articles ANTICHAMBER, and ANTISCORBUTICS.

ANTI, in matters of literature, a title given to ſeveral books written in anſwer to others. Such are the *Anti-baillet*, *Antimenagiana*, &c.

ANTIBACCHIUS, in antient poetry, a foot conſiſting of three ſyllables, the two firſt long, and the laſt one ſhort, ſuch is the word āmbīrĕ.

ANTIBES, a ſea-port town of Provence in France, ſituated on the Mediterranean, in eaſt longitude 7°. north latit. 43°. 40′.

ANTICHAMBER, an outer chamber, for ſtrangers to wait in, till the perſon to be ſpoken with is at leiſure.

A well proportioned anti-chamber ought to be in length the diagonal line of the ſquare of the breadth, and not to exceed the breadth and half at moſt.

ANTICHRESIS, among civilians, the ſame with what in the common law is called a mortgage. See MORTGAGE.

ANTICHRIST, among eccleſiaſtical writers, denotes a great adverſary of chriſtianity, who is to appear upon the earth towards the end of the world. He is called in ſcripture, *the man of ſin*, *the ſon of perdition*, &c. However, as the opinions of authors differ widely concerning him, we ſhall refer the curious to Malvenda, a ſpaniſh monk, who has written expreſsly on the ſubject.

ANTICHTHONES, in antient geography, an appellation given to the inhabitants of oppoſite hemiſpheres, as the ſouthern and northern.

ANTICIPATION, the act of doing a thing before the time.

Anticipating a payment, is to pay it before the time be expired when it is to become due. See the article ADVANCE.

ANTICOR, or ANTICOEUR, among farriers, an inflammation in the horſe's throat; being the ſame with the quinzy in mankind.

Moſt writers are agreed, that this diſorder proceeds from hard riding, expoſing a horſe to the cold, and giving him cold water to drink when he is hot, full feeding, and whatever elſe may cauſe a ſudden ſtagnation of the blood. Some will have it to proceed from fatneſs and rank feeding.

The cure ſhould firſt be attempted by large and repeated bleedings, to abate the inflammation; and Mr. Gibſon approves of ſtriking one or other of the veins of the hind parts to make a revulſion.

Next to bleeding, if the horſe be coſtive or bound in his body, clyſters are of uſe; and Dr. Bracken directs the following as a general one. Take leaves of mallows and pellitory of the wall, of each three handfuls; camomile flowers, one handful; anniſeed and ſweet fennelſeed, each half an ounce; linſeeds, one ounce; boil theſe in three quarts of water to two; then ſtrain and preſs out the liquor ſtrongly, and add of caryocoſtinum electuary one ounce, common ſalt two ounces, and common plaiſter oil three ounces. Mix. Theſe ſhould be injected through a very long pipe, for the purpoſe, and as warm as a man can bear his cheek to the ſide of the bladder it is tied up in, and it ſhould be repeated every two or three days, as occaſion offers.

ANTICOSTE, an american iſland, ſituated before the mouth of the river St. Lawrence, in 64°. weſt longitude, and 49°. 52′. north latitude.

ANTICUS, a term uſed by anatomiſts, importing that the part with which it is joined, ſtands before ſome others: thus, we meet with ſerratus anticus, peronæus anticus, tibialis anticus, &c. See the article SERRATUS, &c.

ANTIDESMA, in botany, a genus of the dioecia pentandria claſs of plants, the calyx of which is a perianthium, conſiſting of five oblong concave leaves; there is no corolla; the fruit is a cylindric berry, containing one cell; in which is lodged a ſingle ſeed.

ANTIDOTE, among phyſicians, a remedy taken to prevent, or to cure peſtilential diſeaſes.

It ſignifies alſo a medicine which prevents the ill effects of poiſon; in which ſenſe it is the ſame with alexipharmic. See the article ALEXIPHARMIC.

AN-

ANTIENT, or ANCIENT, a term applied to things which exiſted long ago: thus, we ſay, antient nations, antient cuſtoms, *&c.*

ANTIENT, ſometimes alſo denotes elderly, or of long ſtanding, in oppoſition to young or new; thus, we ſay, an antient barriſter, antient building, *&c.*

ANTIENT, in a military ſenſe, denotes either the enſign, or the colours.

ANTIENT, in ſhips of war, the ſtreamer or flag, borne in the ſtern.

ANTIENT DEMESNE, or DEMAIN, in law. See the article DEMAIN.

ANTIGUA, or ANTEGO. See ANTEGO.

ANTIHECTICS, in pharmacy, medicines good in hectical diſorders.

The antihecticum poterii, is a preparation of tin, and chalybeated regulus of antimony, in equal quantities, with three times as much nitre, ſaid to do wonders in hectical and nervous caſes.

ANTILLES, the ſame with the Caribbee iſlands. See the article CARIBBEE.

ANTILOGARITHM, the complement of a logarithm. See COMPLEMENT.

ANTILOGY, in matters of literature, an inconſiſtency between two or more paſſages of the ſame book.

ANTILYSSUS PULVIS, a medicine conſiſting of equal parts of the *lichen cinereus terreſtris*, and black pepper, reckoned good to prevent the *rabies canina*.

ANTIMETABOLE, in rhetoric, a figure whereby two things are ſet in oppoſition to each other.

ANTIMONARCHICAL, an appellation given to whatever oppoſes monarchical government. See the article MONARCHY.

ANTIMONIALS, in medicine, preparations of antimony. See ANTIMONY.

ANTIMONIATED, ſomething impregnated with the virtues of antimony.

ANTIMONY, in natural hiſtory, one of the ſemi-metals, as they are called, ſeparated by fuſion from a very hard and heavy, lead-coloured ſubſtance, called antimony-ore: this ore is compoſed of a number of extremely ſmall ſparkling granules, which give it the appearance of a lump of the pureſt ſteel, where freſh broken.

Antimony is of conſiderable uſe in medicine, chymiſtry, and mechanics. It promotes the fuſion of metals, but makes every thing brittle with which it is mixed. It is alſo an ingredient in pewter, bell-metal, and the mixt-metal of which the types for printing are made.

Preparations of ANTIMONY. We find a multitude of theſe in medical writers, ſome of which are diaphoretic, whilſt others are cathartic or emetic. 1. Precipitated ſulphur of antimony, which is a diaphoretic, and ſaid to be a great medicine in ſcorbutic caſes. 2. Crocus, or ſaffron of antimony, called *crocus metallorum*, principally uſed by the farriers for horſes. 3. Waſhed crocus of antimony, of which is made the *vinum antimoniale*, called alſo *vinum emeticum*, and *vinum benedictum*, a powerful emetic, given from one ounce to two or three at a doſe. 4. Emetic tartar, made by boiling equal quantities of waſhed crocus of antimony and cryſtals, or cream of tartar, in three times the weight of the whole of common water; and letting this ſhoot again into cryſtals, which are the emetic tartar. This is ſaid to be a good emetic, and preferable to all the other antimonial ones; its doſe being from two grains to ſix or eight. 5. The calx of antimony, commonly called diaphoretic antimony. 6. The antimonial cauſtic, made with corroſive ſublimate. 7. Cinnabar of antimony. 8. Tincture of antimony. 9. Butter of antimony. 10. Regulus of antimony, with a great many others to be found in diſpenſatories. See CINNABAR, BUTTER, *&c.*

ANTINOMIANS, in church-hiſtory, certain heretics, who firſt appeared about the year 1535, and ſo called becauſe they rejected the law, as of no uſe under the goſpel-diſpenſation, with other doctrines equally abſurd.

ANTIOCH, a town of Syria, formerly its capital, but now in a ruinous condition, ſituated on the river Orontes, in 37°. eaſt longitude, and 36°. north latitude.

ANTIPARALLELS, in geometry, are thoſe lines D E, B C, (plate XIX. fig. 2. N°. 1.) which make the ſame angles A D E, A C B, with the two lines A B, A C, cutting them, like parallel lines, but in oppoſite directions.

But M. Leibnitz calls antiparallels thoſe lines E F, G H, (id. N° 2.) which cut two parallels A B, C D, ſo that the outward angle A D F, being added to the inward one A K H, the ſum may be equal to a right angle.

ANTIPATHY, a natural averſion of one body to another, in contradiſtinction to ſympathy. See SYMPATHY.

Some authors endeavour to account for the antipathy between animals: thus, as

effluvia and ſpirituous ſteams, ſay they, proceed from the bodies of all creatures, ſome of which diſagree with others, they excite hatred and anger in each other.

ANTIPATHY is uſed in painting, for an oppoſition between the qualities of colours.

This antipathy is chiefly obſerved between colours, which endeavour, as it were, to predominate over each other, and which by their mixture deſtroy each other. *e. gr.* ultramarine and vermillion. This does not obtain in the clair obſcure; for tho' there be nothing more oppoſite to each other than black and white, as the one repreſents light, and the other darkneſs; yet they each preſerve themſelves in the mixture, and form together a grey which partakes of both.

ANTIPERISTALTIC *motion of the inteſtines*, the reverſe of the periſtaltic motion. See the article PERISTALTIC.

ANTIPERISTASIS, in the peripatetic philoſophy, an imaginary intention, or heightening of any quality, by the oppoſition of its contrary. Thus, cold is ſaid to augment the heat of fire; a doctrine, which every ſtudent in phyſics can now diſprove.

ANTIPHONY, in muſic, the name which the Greeks gave to that kind of ſymphony which was executed in octave or double octave.

Antiphony is likewiſe the anſwer made by one choir to another, when an anthem is ſung between them.

ANTIPHRASIS, ἀντίφρασις, in rhetoric, a figure by which in ſaying one thing we mean the contrary. See IRONY.

This figure regards ſentences, and not ſingle words.

ANTIPODES, in geography, a name given to thoſe inhabitants of the globe that live diametrically oppoſite to one another. They lie under oppoſite parallels, and oppoſite meridians. They have the ſame elevation of their different poles. It is mid-night with the one, when it is noon-day with the other; the longeſt day with one is the ſhorteſt with the other; and the length of the day with the one is equal to the night of the other.

ANTIPOPE, in the romiſh church, one elected pope in an irregular manner, in oppoſition to another.

ANTIPREDICAMENTS, in logic. See the article ANTEPREDICAMENTS.

ANTIPTOSIS, ἀντίπτωσις, in rhetoric, a figure which puts one caſe for another. See the article CASE.

ANTIQUARY, a perſon who ſtudies and ſearches after monuments and remains of antiquity.

There were formerly in the chief cities of Greece and Italy, perſons of diſtinction called antiquaries, who made it their buſineſs to explain the antient inſcriptions, and give every other aſſiſtance in their power to ſtrangers who were lovers of that kind of learning. We have in London a ſociety of antiquaries incorporated by the king's charter.

ANTIQUATED, ſomething obſolete, out of date, or out of uſe.

ANTIQUE, in a general ſenſe, ſomething that is antient: but the term is chiefly uſed by ſculptors, painters, and architects, to denote ſuch pieces of their different arts; as were made by the antient Greeks and Romans. Thus we ſay, an antique buſt, an antique ſtatue, &c.

Antique is ſometimes contradiſtinguiſhed from antient, which ſignifies a leſs degree of antiquity. Thus, antique architecture is frequently diſtinguiſhed from antient architecture.

ANTIQUITY, ſignifies times or ages paſt long ago. Thus, we ſay, the heroes of antiquity, &c.

ANTIQUITY is alſo uſed to denote the works, or monuments of antiquity.

Thus we ſay, England abounds in antiquities.

In this ſenſe too, Bacon calls antiquities the wrecks of hiſtory, or ſuch particulars as induſtrious perſons have collected from genealogies, inſcriptions, monuments, coins, names, etymologies, archieves, inſtruments, fragments of hiſtory, &c. This is, indeed, a laborious work, but ſuch as ought to come in the place of thoſe fabulous origins of nations we abound with; being not only more uſeful, but likewiſe more acceptable to the judicious part of mankind.

ANTIQUITY likewiſe expreſſes the great age of a thing, and in this ſenſe we ſay the antiquity of a family, the antiquity of a kingdom.

ANTIRRHINUM, the name uſed by botanical writers for a genus of plants, called in engliſh ſnapdragon. See the article SNAPDRAGON.

ANTISAGOGE, in rhetoric, the ſame with conceſſion. See CONCESSION.

ANTISCII, in geography, people who live on different ſides of the equator, whoſe ſhadows at noon are projected oppoſite ways.

ANTI-

ANTISCORBUTICS, among phyſicians, medicines good in all ſcorbutical caſes. See the article SCURVY.

ANTISEPTICS, among phyſicians, a denomination given to all ſubſtances that reſiſt putrefaction.

Concerning theſe, which are extremely numerous, we have ſeveral curious obſervations in Dr. Pringle's diſeaſes of the army. The following table exhibits a comparative view of the antiſeptic virtue of ſalts, the common ſea-ſalt being reckoned equal to unity.

Sea-ſalt	1	Nitre	4
Sal gemmæ	1	Salt of hartſhorn	4
Tartar vitriolat.	2	Salt of wormwood	4
Spirit minder.	2	Borax	12
Tartar ſolub.	2	Salt of amber	20
Sal diuret.	2	Alum	30
Sal ammoniac.	3		

Some reſinous, and other ſubſtances, were found to be twelve times more antiſeptic than ſea-ſalt: ſuch are myrrh, aſa-fœtida, ſnake-root, pepper, ginger, ſaffron, contrayerva-root, &c.

Antiſeptics are of uſe in all putrid, malignant, and peſtilential caſes.

ANTISTOECHON, in grammar, the uſing one letter inſtead of another, as *olli* for *illi*.

ANTISTROPHE, ἀντιστροφη, in grammar, a figure by which two things mutually dependent on one another, are reciprocally converted. As the ſervant of the maſter, and the maſter of the ſervant.

ANTISTROPHE, among lyric poets, that part of a ſong and dance in uſe among the antients, which was performed before the altar, in returning from weſt to eaſt, in oppoſition to ſtrophe. See the articles STROPHE and ODE.

ANTITACTÆ, in church-hiſtory, a branch of gnoſtics, who held that God was good and juſt, but that a creature had created evil; and, conſequently, that it is our duty to oppoſe this author of evil, in order to avenge God of his adverſary.

ANTITHENAR, in anatomy, a name given to the *adductor indicis*. See the article ADDUCTOR.

ANTITHESIS, in rhetoric, a contraſt drawn between two things, which thereby ſerve as ſhades to ſet off the oppoſite qualities of each other.

The poets, hiſtorians, and orators improve their ſubject, and greatly heighten the pleaſure of the reader, by the pleaſing oppoſition of their characters and deſcriptions.

The beautiful antitheſis of Cicero, in his ſecond Catilinarian, may ſerve for an example: 'On the one ſide ſtands modeſty, on the other impudence; on the one fidelity, on the other deceit; here piety, there ſacrilege; here continency, there luſt, &c.'—And Virgil, in his beautiful deſcription of Dido's deſpair, the night before her death, repreſents all the reſt of the creation, enjoying profound tranquility, to render the diſquietudes of that miſerable queen the more affecting. St. Auguſtine, Seneca, and many other antient writers ſeem to affect antitheſis; but among the moderns they are very much neglected.

ANTITHESIS, in grammar, the ſame with antiſtoechon. See ANTISTOECHON.

ANTITHET denotes either a quality or thing, ſet in oppoſition to its contrary.

ANTITHETARIUS, in law, a perſon, who endeavours to acquit himſelf, by charging the accuſer with the ſame fact.

ANTITRAGUS, or ANTITRAGICUS *muſculus*, in anatomy, a muſcle of the ear. See the article EAR.

ANTITRINITARIANS, a general name given to all thoſe who deny the doctrine of the trinity, and particularly to the arians and ſocinians.

ANTITYPE, among eccleſiaſtical writers, denotes a type correſponding to ſome other type or figure.

ANTITYPE, in the greek church, is alſo an appellation given to the ſymbols of bread and wine in the ſacrament, and that even after conſecration: ſo that it ſhould ſeem, they do not believe tranſubſtantiation.

ANTIVARI, a ſea-port town of Albania, ſituated on the gulph of Venice, in 19° 40′ eaſt longitude, and 42° 10′ north latitude. It is ſubject to the Turks.

ANTIVETRIA, a province or ſubdiviſion of Terra Firma, in South America, lying ſouthwards of Carthagena.

ANTLER, among ſportſmen, a ſtart or branch of a deer's attire.

Brow-ANTLER, denotes the branch next the head: and,

Bez-ANTLER, the branch next above the brow-antler.

ANTOECI, in geography, an appellation given to thoſe inhabitants of the earth who live under the ſame meridian, but on different ſides of the equator, and at equal diſtances from it.

Theſe have noon and midnight and all hours at the ſame time, but contrary ſea-

ſons

ſons of the year; that is, when it is ſpring with the one, it is autumn with the other; when ſummer with the one, winter with the other. And the days of the one are equal to the nights of the other, and *vice verſa*.

ANTONIAN WATERS, *antonianæ aquæ*, medicinal waters of Germany, very pleaſant to the taſte, and eſteemed good in many chronic as well as hypochondriac caſes.

This water, if mixed with any acid liquor, raiſes a conſiderable effervescence, and when mixed with rheniſh wine and ſugar, which is a common way of drinking it, it makes a great hiſſing and bubbling, and becomes turbid and milky. If powder of galls be added to it, it ſuffers no change but remains limpid and colourleſs; whence it is plain that it contains no iron, nor vitriol. Syrup of vitriol mixed with it turns the whole green, whence it is plain that it contains an alkali; and if oil of tartar be added to it, it becomes turbid and milky, and precipitates a white ſediment, whence it appears that there is either common ſalt or a calcarious earth in it. If it be expoſed ſometime to the air in an open veſſel, it, like all the other mineral waters, loſes its pungent taſte and pellucidity, becoming turbid and vapid. A quart of it evaporated with a very gentle heat leaves two ſcruples of a dry ſediment, which being ſeparated by another ſolution is found to be one half an alkaline ſalt, and the other a calcarious earth. Oil of vitriol mixed with the ſalt produces a great effervescence, and a penetrating ſcent ariſes like that produced by the mixing oil of vitriol and common ſalt. Hence it appears that theſe waters contain a ſmall portion of an alkaline ſalt, a larger portion of ſea-ſalt, and a yet larger of a calcarious earth, and with theſe a very conſiderable quantity of a ſubtile and penetrating mineral ſpirit.

It is a very temperate water, not too ſtrongly operating either by ſtool or urine; and hence it is a very proper drink for perſons in chronic and in many acute caſes, either alone or mixed with wine to ſupply the place of malt liquor, which is proper but in very few illneſſes. A long uſe of it alone may alſo prove of conſiderable ſervice in hypochondriac caſes.

ANTONIO, one of the Cape Verd iſlands, ſubject to the Portugueſe, and ſituated in 26° weſt longitude, and 18° north lat.

ANTONOMASIA, in rhetoric, a figure by which the proper name of one thing is applied to ſeveral others; or, on the contrary, the name of ſeveral things to one. Thus we call a cruel perſon, a Nero; and we ſay the philoſopher, to denote Ariſtotle.

ANTRIM, the moſt north-eaſt county of Ulſter, in the kingdom of Ireland.

ANTRIM is alſo the name of the chief town of the aforeſaid county, ſituated at the north end of Lough-neah, in 6° 26′ weſt longitude, and 54° 45′ north latitude.

ANTRUM, among anatomiſts, a term uſed to denote ſeveral cavities of the body, as the *antrum genæ*, or that in the cheek-bone; the *antrum highmorianum*, or that in the maxillary or jaw-bone; and the *antrum pilori*, or that at the bottom of the pylorus.

ANTWERP, a beautiful city of the Auſtrian Netherlands, and capital of the marquiſate of the ſame name. It ſtands on the eaſtern ſhore of the river Scheld, about twenty-five miles north of Bruſſels, in 4° 15′ eaſt longitude, and 51° 15′ north latitude.

ANVIL, an iron inſtrument on which ſmiths hammer or forge their work, and uſually mounted on a firm wooden block. See it repreſented in plate CCLIII. fig. 2. among the utenſils or tools belonging to the art of SMITHERY.

A forged anvil is reckoned better than one of caſt work.

ANUS, in anatomy, the extremity of the *inteſtinum rectum*, or orifice of the fundament. It is ſurrounded with a large quantity of fat, that it may be eaſily dilated in the evacuation of its contents, and is furniſhed with three muſcles called elevatores and ſphincter. See the article SPHINCTER, *&c.*

Anus denotes alſo a ſmall cavity in the third ventricle of the brain. See BRAIN.

ANUS, in botany, ſignifies the poſterior opening of a monopetalous flower.

AONIDES, in mythology, one of the many appellations of the muſes, ſo called from Aonia, a part of antient Bœotia.

AORIST, ἀοριστος, among grammarians, a tenſe peculiar to the greek language, comprehending all the tenſes; or rather, expreſſing an action in an indeterminate manner, without any regard to paſt, preſent, or future.

AORTA, in anatomy, called alſo *arteria magna*, a large artery ariſing with a ſingle trunk from the left ventricle of the heart above

above its valves, called ſemilunares, ſerves to convey the maſs of blood to all parts of the body.

After aſcending a little upwards, its trunk is bent, in manner of an arch, and from this part it ſends, in human ſubjects, uſually three aſcending branches. This is called the *aorta aſcendens*.

The *deſcendens* is that part of the trunk which, after the arch-like inflection deſcends thro' the thorax and the abdomen down to the os ſacrum, and is uſually larger in women than in men. The *aorta* hath four tunics, a nervous, a glandulous, a muſcular, and a membranous one. See the article ARTERY.

AOUST, a town of Piedmont in Italy, capital of the dutchy of the ſame name, ſituated about fifty miles north of Turin, in 7° 10′ eaſt longitude, and 45° 45′ north latitude.

APAGOGICAL DEMONSTRATION, an indirect way of proof, by ſhewing the abſurdity of the contrary.

APALACHIAN MOUNTAINS, a ridge of mountains of north America, lying weſtward of the britiſh plantations, and extending from 30° to 40° north latitude.

APAMEA, or HAMA, a town of Syria, ſituated on the river Orontes, in 38° 30′ eaſt longitude, and 34° north latitude.

APAMEA is alſo the name of a town of Phrygia, upon the river Marſyas; of a town of Media, confining upon Parthia; and of a town of Bithynia, called by the Turks Myrlea.

APANAGE, or APENNAGE, in the french cuſtoms, lands aſſigned by a ſovereign for the ſubſiſtence of his younger ſons, which revert to the crown upon failure of male iſſue in that branch to which the lands are granted.

In England, the younger ſons have no certain apanage, as in France, but only what the king is pleaſed to beſtow upon them.

APARINE, CLEAVERS, in botany, a genus of plants, with a campanulated monopetalous flower, very wide at the mouth. Its fruit is a kind of dry berry, formed of two ſmall globoſe bodies adhering together, and containing a ſingle roundiſh ſeed. See plate XIX. fig. 3.

Aparine is of ſome repute as an antiſcorbutic. It is called by Linnæus gallium. See GALLIUM.

APARTMENT, a portion of a houſe, containing different conveniencies for a perſon to live in; as a hall, or dining-room, a bed-chamber, an anti-chamber, a cloſet, and wardrobe.

APATHY, a term in philoſophy, denoting an utter privation of paſſion, and an inſenſibility of pain. Thus, the ſtoics affected an entire apathy, ſo as not to be ruffled, or ſenſible of pleaſure or pain.

APATURIA, ἀπατούρια, in grecian antiquity, an athenian feſtival kept in honour of Bacchus.

It was during this ſolemnity, that the young people were regiſtered in the reſpective wards of their fathers.

APE, in zoology, the engliſh name of the *ſimiæ*, or monkeys without any tail. See the article SIMIA.

APELLITES, chriſtian heretics in the ſecond century, who affirmed that Chriſt received a body from the four elements, which at his death he rendered back to the world, and ſo aſcended into heaven without a body.

APENE, ἄφην, in antiquity, the chariot in which the images of the gods were carried on ſolemn occaſions.

APENRADE, a town of Sleſwic, or ſouth Jutland, ſituated on a bay of the Baltic-ſea, in 10° eaſt longitude, and 55° north latitude.

APENZEL, a town of Switzerland, capital of the canton of the ſame name, and ſituated in 9° eaſt longitude, and 47° 30′ north latitude.

APEPSY, in medicine, denotes crudity or a bad digeſtion, ariſing from a rawneſs of the ſtomach, and a want of concoction of the aliments.

APER, in zoology, the boar, or male of the hog-kind. See the article HOG.

APER, in ichthyology, a name by which ſome call two very diſtinct fiſhes, the zeus and capriſcus. See the articles ZEUS, and CAPRISCUS.

APER *moſchiferus*, the muſk-boar, in zoology, the ſame with the american tajacu. See the article TAJACU.

APE'RIENS, *palpebram rectus*, in anatomy, a muſcle of the eye-lid. It ariſes ſharp and fleſhy from the profoundeſt part of the orbit, near the place where the optic nerve is tranſmitted, paſſing directly over the muſculus attollens; it becomes tendinous, as it marches over the ball of the eye, whence it ſtill grows broader and thinner, till it is inſerted into the whole ſuperior part of the upper eye-lid.

APERIENTS, in the materia medica, an appellation given to ſuch medicines as facilitate the circulation of the juices in their

their containing veſſels, by removing all obſtructions. See the articles DETERGENTS and DEOBSTRUENTS.

The five greater aperient roots of the ſhops are ſmallage, fennel, aſparagus, parſly, and butcher's-broom; as the five leſſer ones are graſs, madder, eryngo, capers, and chammoc.

APERTURE, the opening of any thing, or a hole or cleft in any continuous ſubject.

APERTURE, in geometry, the ſpace between two right lines which meet in a point, and form an angle.

APERTURE, in optics, a round hole in a turned bit of wood or plate of tin, placed within ſide of a teleſcope or microſcope, near to the object glaſs, by means of which more rays are admitted, and a more diſtinct appearance of the object is obtained. According to Mr. Huygens, the beſt aperture for an object glaſs of thirty feet, is as thirty to three; that is, as ten to one, ſo is the ſquare root of the focal diſtance of any lens, multiplied by thirty to its proper aperture. Mr. Auzout ſays, he found by experience, that the proper apertures of teleſcopes, ought to be nearly in the ſubduplicate ratio of their length. It is certain that object-glaſſes will admit of greater apertures, if the tubes be blackened within ſide, and their paſſage be furniſhed with wooden rings.

APERTURES, or APERTIONS, in architecture, are uſed to ſignify doors, windows, chimneys, outlets and inlets for light, ſmoke, &c. They ought to be as few in number, and as moderate in dimenſions as poſſible, and never made too near the angles of the walls.

APERTURA TABULARUM, in law books, the breaking open a laſt will and teſtament. See the article WILL, &c.

APERTURA FEUDI, in the civil law, ſignifies the loſs of a feudal tenure, by default of iſſue to him to whom the feud was firſt granted. See the article FEE.

APETALOSE, or APETALOUS, among botaniſts, an appellation given to ſuch plants as have no flower-leaves.

APEX, in antiquity, the creſt of a helmet, but more eſpecially a kind of cap worn by the flamens.

APEX, among grammarians, denotes the mark of a long ſyllable, falſely called a long accent. See the article ACCENT.

APHACA, VETCHLING, in botany, a genus of plants, with papilionaceous flowers, and a ſmall pod for its ſeed-veſſel. Linnæus makes it only a ſpecies of lathyrus. See plate XIX. fig. 4. and the article LATHYRUS.

APHÆRESIS, ἀφαίρεσις in grammar, a figure by which a letter or ſyllable is cut off from the beginning of a word.

APHÆRESIS, that part of ſurgery which teaches to take away ſuperfluities.

APHANES, PARSLEY-PIERT, in botany, a genus of the tetrandria digynia claſs of plants, the calyx of which is a permanent perianthium of a tubulated figure, conſiſting of a ſingle leaf divided into eight ſegments at the edge, and thoſe alternately larger and ſmaller: there is no corolla; nor is there any pericarpium; but the calyx cloſes at the mouth, and contains two oval acuminated ſeeds, compreſſed, and of the length of the ſtyle.

APHELIUM, or APHELION, in aſtronomy, is that point in any planet's orbit, in which it is fartheſt diſtant from the ſun; being in the new aſtronomy, that end of the greater axis of the elliptical orbit of the planet, moſt remote from the focus wherein the ſun is.

The times of the aphelia of the primary planets, may be known by their apparent diameters appearing leaſt; as alſo, by their moving ſloweſt in a given time. They may likewiſe be found by calculation, the method of doing which is delivered in moſt aſtronomical writers.

Kepler places the aphelia for the year 1700, as in tab. N°. 1; and De la Hire, as in tab. N°. 2.

Tab. N°. 1.					Tab. N°. 2.				
♄ in	28°	3′	48″	of ♎	♄ in	29°	14′	41″	of ♎
♃	8	10	40	♎	♃	10	17	14	♎
♂	0	51	29	♏	♂	0	35	25	♏
♀	3	24	27	♐	♀	6	56	10	♐
☿	8	25	30	♑	☿	31	3	40	♑

De la Hire makes the yearly motion of them to be ♄ 1′ 22″, ♃ 1′ 34″, ♂ 1′ 7″, ♀ 1′ 26″, and ☿ 1′ 39″.

Dr. Halley has given us a ſtrict geometrical method for finding the aphelia of the planets, in the Philoſ. Tranſact. N°. 228.

Sir Iſaac Newton and Dr. Gregory have proved that the aphelia of the primary planets are at reſt. See Princip. prop. 14. lib. 3. And in the ſcholium to the above propoſition they ſay, that the planets neareſt to the ſun, *viz.* Mercury, Venus, the Earth, and Mars, from the actions of Jupiter and Saturn upon them, move a ſmall matter in conſequentia with regard

to

to the fixed ſtars, and that in the ſeſquiplicate ratio of their reſpective diſtances from the ſun.

APHIS, in zoology, the general name for the inſects called in engliſh tree-lice.

The aphis has fourerect wings, or none at all; its trunk is reflex; and the body is formed into two horns behind.

APHORISM, αφορισμος, a maxim or principle of a ſcience; or a ſentence which comprehends a great deal in a few words. The term is ſeldom uſed but in medicine and law. We ſay the aphoriſms of Hippocrates, the aphoriſms of the civil law, political aphoriſms, &c.

APHORISTIC, ſomething belonging to, or partaking of, the nature of an aphoriſm. See the preceding article.

The aphoriſtic method ſtands contradiſtinguiſhed to the ſyſtematic, or methodical, as alſo to the diexodic, or diſcurſive way. The aphoriſtic method has great advantages, as containing much matter in a ſmall compaſs; ſentiments are here almoſt as numerous as expreſſions; and doctrines may be counted by phraſes. Every thing is cloſe and pertinent, no room for uſeleſs diſcuſſions, or for languiſhing connections, and tranſitions; there is hardly a word to be loſt.

APHRACTI, αφρακτοι, in the maritime affairs of the antients, were open veſſels, without any decks.

APHRODISIA, αφροδισια, in antiquity, feſtivals kept in honour of Venus, the moſt remarkable of which was that celebrated by the Cyprians, firſt inſtituted by Cinyras, out of whoſe family certain prieſts of Venus were elected, and for that reaſon named Κινυραδαι. At this ſolemnity ſeveral myſterious rites were practiſed: all who were initiated to them offered a piece of money to Venus as an harlot, and received as a token of the goddeſs's favour a meaſure of ſalt, and a φαλλος; the former becauſe ſalt is a concretion of ſea-water, to which Venus was thought to owe her birth; the latter becauſe ſhe was the goddeſs of wantonneſs.

APHRODISIACS, among phyſicians, medicines which increaſe the quantity of ſeed, and create an inclination to venery.

APHRODITA, in zoology, one of the naked ſea-inſects, of an oval ſhape, and acculeated, with a perforation in the middle of the back.

APHTHÆ, in medicine, ſmall, round, and ſuperficial ulcers ariſing in the mouth. The principal ſeat of this diſeaſe, is the extremity of excretory veſſels, ſalival glands, and, in ſhort all glands that furniſh a humour like the ſaliva, as the lips, gums, &c.

Children and old men are ſubject to the aphthæ, becauſe the *vis vitæ* in both is languid, and the humours liable to become viſcous. In the cure of the aphthæ, it will be proper to uſe *mel roſatum*, acidulated with the ſpirit of vitriol.

APHYA COBITES, in ichthyology, a ſpecies of gobius, with ſeventeen rays in the ſecond dorſal fin. See GOBIUS.

It is a very pretty, tho' a very ſmall fiſh, about an inch and a half long; the head is ſhort and compreſſed, and the body rounded and alſo ſomewhat compreſſed.

APHYLLANTHES, the *blue montpellier-pink*, in botany, a genus of the hexandria monogynia claſs of plants, the calyx of which is compoſed of a number of imbricated, lanceolated ſpathæ; the corolla conſiſts of ſix petals, of an obverſely oval figure, terminating at the baſe in very narrow ungues, and patent at the limb, forming a kind of tube below it: the fruit is a turbinated capſule of a triangular figure, and contains three cells; the ſeeds are oval.

APIARY, a place where bees are kept, which ſhould be properly defended from high winds, as well as from poultry, hogs, &c. whoſe dung is extremely offenſive to the bees. See BEE and HIVE.

APICES, in botany, the ſame with antheræ. See the article ANTHERÆ.

APIS, or APES, in zoology, a genus of four-winged inſects, with wings entirely membranaceous, and their tails furniſhed with a ſting; comprehending the bee, hornet, waſp, and humble-bee. See the articles BEE, HORNET, &c.

APIUM, PARSLEY, in botany, a genus of the pentandria digynia claſs of plants, the partial umbel of which is compoſed of a great many rays; the general umbel of fewer: they have neither of them any involucra; the perianthium is ſcarce viſible; the general corolla is uniform; the ſingle flowers conſiſt each of five roundiſh, inflex, equal petals: the fruit is naked, oval, ſtriated, and diviſible into two parts, containing two ſeeds of an oblong oval ſhape, convex and ſtriated on one ſide, and plane on the other. See the article PARSLEY.

APLUDA, in botany, a genus of the triandria digynia claſs of plants, the common calyx of which is an univalve, biflora, ovated, concave, looſe, mucronated,

ed glume; the proper glume is bivalve, and placed obliquely; the corolla is a bivalve glume of the length of the cup: there is no pericarpium: the ſeed, which is ſingle, is involved in the glume of the corolla.

APLUSTRE, APLUSTRÆ, or AMPLUSTRÆ, in the naval architecture of the antients, an ornament reſembling a ſhield fixed in the poop of a ſhip, in which caſe it differed from the acroſtolium. See the article ACROSTOLIUM.

APOBATERION, in antiquity, a valedictory ſpeech or poem made by a perſon on departing out of his own country, and addreſſed to his friends or relations.

APOCALYPSE, ἀποκαλυψις, one of the ſacred books of the New Teſtament, ſo called from its containing revelations concerning ſeveral important doctrines of chriſtianity.

It ſtands laſt in the canon of ſcripture, and is generally attributed to the apoſtle St. John; tho' there have not been wanting ſome, who aſcribe it to other authors, and even wholly reject it as ſpurious.

APOCOPE, among grammarians, a figure which cuts off a letter or ſyllable from the end of a word, as *ingeni* for *ingenii*.

APOCRISIARIUS, in antiquity, an officer who delivered the meſſages of the emperor. He became afterwards chancellor, and kept the ſeals. It was alſo a title given to a biſhop's reſident at court, to the pope's deputy at Conſtantinople, and to the treaſurer of a monaſtery.

APOCRUSTICS, ἀποκρυστικα, in medicine, the ſame with repellents. See the article REPELLENTS.

APOCRYPHAL, ſomething dubious, is more particularly applied to certain books not admitted into the canon of ſcripture. Thoſe are certain books of the Old Teſtament extant only in greek, admitted by the church of Rome as canonical, but rejected by the reformed churches as no part of holy writ; ſuch are the books of Judith, Wiſdom, Tobit, Baruch, Maccabees, the third and fourth books of Eſdras.

In this ſenſe apocryphal ſtands diſtinguiſhed from canonical, though the romiſh church diſowns the diſtinction. See the articles CANON and CANONICAL.

Authors are divided as to the origin of the appellation apocryphal, and the reaſon why it was given to theſe books.

The apocryphal books were not received into the canon, either of the Jews, or antient Chriſtians, but were firſt made canonical by a decree of the council of Trent. The apocryphal books, according to the ſixth article of the church of England, are to be read for example of life and inſtruction of manners; but it doth not apply them to eſtabliſh any doctrine.

APOCYNUM, DOGSBANE, in botany. See the article DOGSBANE.

APODICTICAL, among philoſophers, a term importing a demonſtrative proof, or ſyſtematical method of teaching.

APOGEE, *apogæum*, in the old aſtronomy, that point of the orbit of a planet, or the ſun, which is fartheſt from the earth.

Antient aſtronomy, which placed the earth in the center of the ſyſtem, was much taken up in aſcertaining the apogee and perigee; which the moderns have changed for aphelium and perihelium. See the article APHELIUM, &c.

APOLLINARIAN GAMES, in roman antiquity, an appellation given to certain theatrical entertainments, celebrated annually in honour of Apollo. They were inſtituted in the year of Rome 542. The occaſion was a kind of oracle delivered by the prophet Marcus after the fatal battle at Cannæ, declaring, that to expel the enemy, and cure the people of an infectious diſeaſe, which then prevailed, ſacred games were to be annually performed in honour of Apollo; the prætor to have the direction of them, and the decemviri to offer ſacrifices after the grecian rite.

APOLLINARIANS, or APOLLINARISTS, in church hiſtory, a ſect of heretics who maintained, that Jeſus Chriſt had neither a rational human ſoul, or a true body.

APOLLONIA, in antiquity, an annual feſtival celebrated by the Ægialians in honour of Apollo.

APOLOGETIC, or APOLOGETICAL, ſomething ſaid or written in the manner of an apology. See APOLOGY.

APOLOGUE, in matters of literature, an ingenious method of conveying inſtruction by means of a feigned relation, called a moral fable.

The only difference between a parable and an apologue is, that the former being drawn from what paſſes among mankind, requires probability in the narration: whereas the apologue being taken from the ſuppoſed actions of brutes, or even of things inanimate, is not tied down to the ſtrict rules of probability. Æſop's fables are a model of this kind of writing.

APOLOGY, *απολογια*, a Greek term literally importing an excuſe or defence, of ſome perſon, action, and the like; whether made by word of mouth, *vivâ voce*, or in writing.

APOMELI, among antient phyſicians, a decoction of honey and vinegar, much uſed as a detergent, promoter of ſtool, urine, *&c.*

APONEUROSIS, *απονευρωσις*, among phyſicians, a term ſometimes uſed to denote the expanſion of a nerve or tendon in the manner of a membrane; ſometimes for the cutting off a nerve; and, finally, for the tendon itſelf.

APOPHLEGMATIZANTS, in pharmacy, medicines proper to clear the head from ſuperfluous phlegm, whether by ſpitting, or by the noſe; and conſequently comprehending maſticatories, and ſternutatories, or errhines.

APOPHTHEGM, *αποφθεγμα*, a ſhort, ſententious, and inſtructive remark pronounced by a perſon of diſtinguiſhed character. Such are the apophthegms of Plutarch, and thoſe of the antients collected by Lycoſthenes.

APOPHYGE, in architecture, a concave part or ring of a column, lying above or below the flat member. The French call it *le conge d'en bas*, or *d'en haut*; the Italians, *cavo de baſſo*, or *di ſopra*, and alſo *il vivo di baſſo*.

The apophyge, originally, was no more than the ring, or ferril, at firſt fixed on the extremities of wooden pillars, to keep them from ſplitting; which, afterwards, was imitated in ſtone.

APOPHYSIS, in anatomy, an excreſcence from the body of a bone, of which it is a true continuous part, as a branch is of a tree.

The apophyſes take different names, with reſpect to their ſituation, uſe or figure; ſuch are coracoides, mamellaris, maſtoides, ſtyloides, obliqua, recta, ſuperficialis, *&c.* See CORACOIDES, *&c.*

The principal uſes of the apophyſes are, 1. To make the better articulations, whether theſe be intended to have motion, or to be fixed. 2. To afford a firm place of inſertion for the muſcles. And, 3. To defend the other parts.

APOPLECTIC, whatever relates or belongs to an apoplexy. Thus we ſay, an apoplectic fit. See the next article.

APOPLEXY, a diſtemper in which the patient is ſuddenly deprived of the exerciſe of all the ſenſes, and of voluntary motion; while a ſtrong pulſe remains with a deep reſpiration, attended with a ſtertor, and the appearance of a profound ſleep. This diſorder ariſes from whatever cauſe is capable of preventing either totally or in part, the influx of the nervous fluid to the organs of ſenſe, and the reflux of the ſame fluid from theſe organs to the common ſenſory in the brain. 1. The natural make of the body may diſpoſe to an apoplexy, when a large head and ſhort neck favour the congeſtion of blood and humours in the head; or a corpulent body renders the capillary arteries ſubject to compreſſion. 2. It may be occaſioned by polypous concretions in the carotid or vertebral arteries, or by an inflammatory fizineſs, and thick pituitous diſpoſition of the whole maſs of blood. 3. By an extravaſation of the reſpective fluids contained in the arterial, nervous and lymphatic veſſels; and, finally, by whatever obſtructs the return of the blood from the veſſels of the brain to the heart. Hence it appears that apoplexies are produced by various cauſes, and may properly enough be diſtinguiſhed into ſanguinous and pituitous, to which may be added ſerous, atrabilarious, polypous, *&c.*

An apoplexy may be foreſeen from the frame of the body, from a knowledge of the prediſpoſing cauſes; and from the firſt effects of theſe cauſes, as a tremor, vacillation, vertigo, ſtupor, deprivation of memory, and a frequent incubus. As to the cure and prevention of an apoplexy, no univerſal rules can be laid down; for the method of relief muſt vary, according to the prediſpoſing cauſes and the parts principally affected. In general, however, it is neceſſary to procure evacuations by all poſſible means, by emetics, and by acrid clyſters; and not to omit external topics to the head, which ſtimulate or reſolve, of which kind bliſters raiſed by cantharides are of the greateſt ſervice. During the fit, copious bleeding in the jugulars is to be uſed, ſtrong volatiles to be applied to the noſe, and the temples rubbed with cephalic mixtures. Arteriotomy, ſcarification of the occiput, and the actual cautery, are alſo recommended.

APORRHOEA, a term uſed by ſome writers, to denote any kind of effluvia. See the article EFFLUVIUM.

APOSIOPESIS, *αποσιωπησις*, in rhetoric, the ſuppreſſing, or omitting to relate a

part of the ſubject: thus the poet paſſes off the circumſtance of Dido's killing herſelf.

Dixerat, atque illam media inter talia ferro
Collapſam adſpiciunt.

APOSTACY, the abandoning the true religion. The primitive chriſtian church diſtinguiſhed ſeveral kinds of apoſtacy. The firſt of thoſe who went over intirely from chriſtianity to judaiſm; the ſecond of thoſe who mingled judaiſm and chriſtianity together; and the third of thoſe who complied ſo far with the Jews, as to communicate with them in many of their unlawful practices, without making a formal profeſſion of their religion. But the fourth ſort was of thoſe who, after having been ſometime chriſtians, voluntarily relapſed into paganiſm.

APOSTATE, one who deſerts his religion. Among the romaniſts, it ſignifies a man who, without a legal diſpenſation, forſakes a religious order of which he had made profeſſion. Hence,

APOSTATA CAPIENDA, in the Engliſh law, a writ that formerly lay againſt a perſon who having entered into ſome order of religion, broke out again, and wandered up and down the country.

A POSTERIORI, or *demonſtration* A POSTERIORI. See the article DEMONSTRATION.

APOSTHUME, or APOSTEM, *αποσημα*, the ſame with abſceſs. See ABSCESS.

APOSTIL, *apoſtilla*, in matters of literature, the ſame with a marginal note.

APOSTLE, *αποστολος*, properly ſignifies a meſſenger or perſon ſent by another upon ſome buſineſs; and hence, by way of eminence, denotes one of the twelve diſciples, commiſſioned by Jeſus Chriſt to preach the goſpel.

The apoſtles are uſually repreſented with their reſpective badges: thus, Peter is painted with the keys; Paul, with a ſword; Andrew, with a croſs; James the greater, with a pilgrim's ſtaff, and a gourd-bottle; James the leſs, with a fuller's pole; John, with a cup and a winged ſerpent flying out of it; Bartholomew, with a knife; Philip, with a long ſtaff, the upper end of which is formed into a croſs; Thomas, with a lance; Matthew, with a hatchet; Mathias, with a battle-ax; Simon, with a ſaw; and Jude, with a club.

APOSTLES-*Creed*. See the article CREED.

APOSTOLIC, or APOSTOLICAL, ſomething connected with, or derived from, the apoſtles. See the article APOSTLE.

APOSTOLICI, an early ſect of chriſtians, who pretended to lead their lives in imitation of the apoſtles. They condemned marriage.

APOSTROPHE, in rhetoric, a figure by which the orator, in a vehement commotion, turns himſelf on all ſides, and applies to the living and dead, to angels and to men, to rocks, groves, &c. Thus Adam in Milton's *Paradiſe loſt*,

O woods, O fountains, hillocks, dales, and bowers,
With other echo, &c.

APOSTROPHE, in grammar, a mark placed over a letter to ſhew that a vowel is cut off, as *call'd* for *called*, *th' audience* for *the audience*.

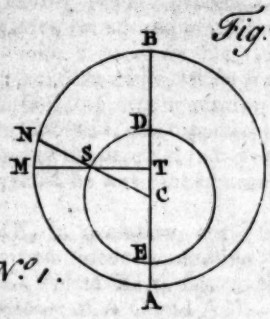
APOTACTITES, in church hiſtory, a name given to the apoſtolici, from the ſhew they made of renouncing the world, more than other men. See APOSTOLICI.

APOTHECARY, one who practiſes the art of pharmacy.

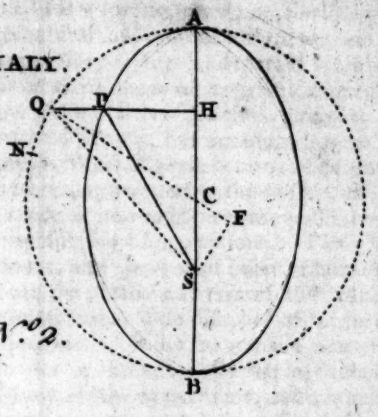
This is a genteel buſineſs, and has been in great vogue of late years; there being, as is computed, upwards of a thouſand in and about London. A youth intended for this profeſſion, ſhould be a pretty good ſcholar, and have ſuch a knowledge in the Latin tongue, as to be able to read the beſt writers upon the ſubject of botany, pharmacy, anatomy, and medicine. In London, the apothecaries are one of the city companies, and by an act which was made perpetual in the ninth year of George I. are exempted from ſerving upon juries, or in ward and pariſh offices. They are obliged to make up their medicines according to the formulas preſcribed in the college diſpenſatory, and are liable to have their ſhops viſited by the cenſors of the college, who are impowered to deſtroy ſuch medicines as they think not good.

APOTHEOSIS, in antiquity, a ceremony by which the antient Romans complimented their emperors and great men after their death, with a place among the gods. It is deſcribed as follows. After the body of the deceaſed had been burnt with the uſual ſolemnities, an image of wax, exactly reſembling him, was placed on an ivory couch, where it lay for ſeven days, attended by the ſenate and ladies of the higheſt quality in mourning; and then the young ſenators and knights bore the bed of ſtate thro' the *via ſacra* to the old *forum*, and from thence to the *campus martius*, where it was depoſited upon an edifice built in form of a pyramid. The bed being thus placed, amidſt a quantity of

Fig. 1. ANOMALY.



N.o 1.



N.o 2.

Fig. 3. APARINE.



N.o 1.

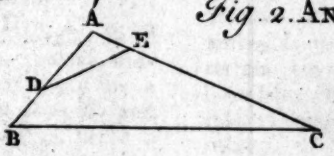


Fig. 2. ANTIPARALLELS.

N.o 2.

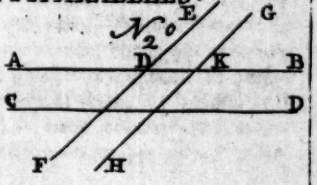


Fig. 4. APHACA, or *VETCHLING.*



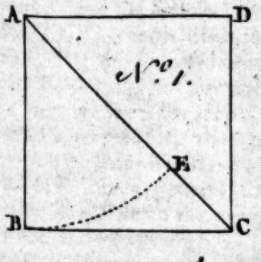
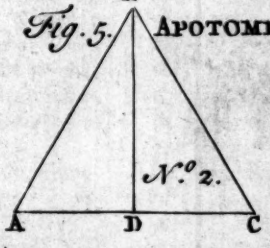


Fig. 5. APOTOME.



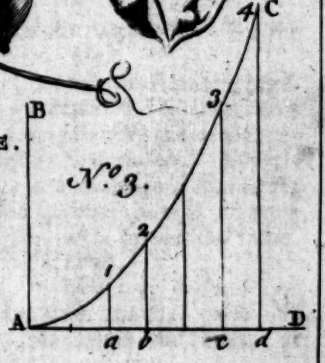
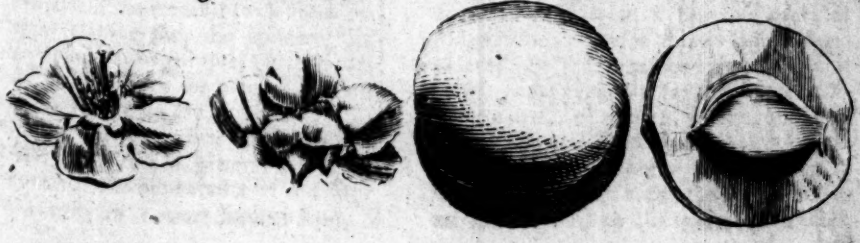


Fig. 6. APRICOT, *ARMENIACA.*



T. Jefferys sculp.

BRITISH MUSEUM

of ſpices and other combuſtibles, and the knights having made a proceſſion in ſolemn meaſure round the pile, the new emperor, with a torch in his hand, ſet fire to it, whilſt an eagle, let fly from the top of the building, and mounting in the air with a firebrand, was ſuppoſed to convey the ſoul of the deceaſed to heaven, and thenceforward he was ranked among the gods.

APOTOME, in geometry, the difference between two incommenſurable lines: thus, E C, (plate XIX. fig. 5. N°. 1.) is the apotome of A C and A B.

If we ſuppoſe A C=a, and A B=b, then will their apotome be $a-\sqrt{b}$; or, in numbers, $2-\sqrt{3}$. Hence alſo the difference between the ſide A C=2 (*ibid.* N°. 2.) of an equilateral triangle A B C, and the perpendicular B D=$\sqrt{3}$. is an apotome, *viz.* $=2-\sqrt{3}$, And, univerſally, if A C (*ibid.* N°. 3.) be a ſemi-parabola, whoſe axis is A B, and its latus rectum=1, and if A D be a tangent to the vertex at A, and this be divided into the parts A a=2, A b=3, A c=5, A d=6, &c. and perpendiculars a 1, b 2, c 3, d 4, &c. be drawn, theſe will be, from the nature of the curve, $\sqrt{2}$, $\sqrt{3}$, $\sqrt{5}$, $\sqrt{6}$, &c. reſpectively; and ſo $\frac{1}{2}$ A a (=1)$-a$ 1, will be $1-\sqrt{2}$; A $a-b$ 2 will be $2-\sqrt{3}$, &c. by which means you will have an infinite ſeries of different apotomes.

APOTOME, in muſic, the difference between a greater and leſſer ſemi-tone, expreſſed by the ratio 128 : 125.

APOZEM, a medicine; the ſame with decoction. See the article DECOCTION.

APPARATUS, a term uſed to denote a complete ſet of inſtruments, or other utenſils, belonging to any artiſt or machine: thus we ſay a ſurgeon's apparatus, a chemiſt's apparatus, the apparatus of the air-pump, microſcope, &c.

APPARENT, in a general ſenſe, ſomething that is viſible to the eyes, or obvious to the underſtanding.

APPARENT, among mathematicians and aſtronomers, denotes things as they appear to us, in contradiſtinction from real or true: thus we ſay, the apparent diameter, diſtance, magnitude, place, figure, &c. of bodies. See the articles DIAMETER, DISTANCE, &c.

APPARENT motion. See MOTION.

APPARITION, in a general ſenſe, denotes ſimply the appearance of a thing.

APPARITION, in a more limited ſenſe, is uſed for a ſpectre, ghoſt, or the like præternatural appearance: thus we read of apparitions of angels, departed ſouls, &c. Several inſtances of apparitions occur in the Bible; that of Samuel, raiſed by the witch of Endor, has occaſioned great diſputes. We find great controverſies among authors, in relation to the reality, the exiſtence or non-exiſtence, the poſſibility or impoſſibility of apparitions. The Chaldeans, the Jews and other nations have been the ſteady aſſerters of the belief of apparitions. The diſbelief of ſpirits and apparitions, is by ſome made one of the marks of infidelity, if not of atheiſm. Many of the apparitions, we are told of in writers, are doubtleſs mere deluſions of the ſenſe; many others were ſeen but in dreams or deliquiums; many others are fictions contrived merely to amuſe, or anſwer ſome purpoſe. Apparitions it is certain are machines that on occaſion have been of good ſervice both to generals, to miniſters of ſtate, to prieſts and others. It has been controverted whether an apparition be any proof of a future ſtate.

The abbé de St. Pierre has a diſcourſe expreſs on the phyſical method of ſolving or accounting for apparitions; he makes them the effect of feveriſh dreams, diſturbed imaginations, &c.

APPARITION, in aſtronomy, ſignifies a ſtar or other luminary's becoming viſible, which before was hid. It ſtands oppoſed to occultation.

Circle of perpetual APPARITION. See the article CIRCLE, &c.

APPARITOR, among the Romans, a general term to comprehend all attendants of judges and magiſtrates appointed to receive and execute their orders. Apparitor, with us, is a meſſenger, that ſerves the proceſs of a ſpiritual court, or a beadle in an univerſity, who carries the mace. See the article BEADLE.

APPAUMEE, in heraldry, denotes one hand extended with the full palm appearing, and the thumb and fingers at full length.

APPEAL, in law, the removal of a cauſe from an inferior to a ſuperior court or judge, when a perſon thinks himſelf aggrieved by the ſentence of the inferior judge. Appeals lie from all the ordinary courts of juſtice to the houſe of lords. In eccleſiaſtical cauſes, if an appeal is brought before a biſhop, it may be removed to the archbiſhop; if before an archdeacon, to the court of arches, and

and thence to the archbiſhop; and from the archbiſhop's court to the king in chancery.

Appeal, in common law, is taken for the accuſation of a murderer by a perſon who had intereſt in the party killed; or of a felon by an accomplice. It is proſecuted either by writ or by bill: by writ, when a writ is purchaſed out of the chancery by one perſon againſt another, commanding him to appeal ſome third perſon of felony, and to find pledges for doing it effectually; by bill, when the perſon himſelf gives in his accuſation in writing, offering to undergo the burden of appealing the perſon therein named.

APPEAL OF MAIM is the accuſing one that has maimed another.

APPEAL OF RAPE lies where any woman is raviſhed. Theſe laſt are now much diſuſed, but the appeal of murder is frequently brought.

APPEARANCE, in a general ſenſe, the exterior ſurface of a thing, or that which immediately ſtrikes the ſenſe, or the imagination.

APPEARANCE, in law, ſignifies a defendant's filing a common or ſpecial bail, on any proceſs iſſued out of a court of judicature. In actions by original, appearances are entered with the philazer of the county; and by bill, with the prothonotary.

In perſpective, APPEARANCE is the projection of a figure or body on the perſpective plane. In optics, direct appearance is the ſight of any object by direct rays, without refraction or reflection.

In aſtronomy, APPEARANCE ſignifies the ſame as phænomena or phaſes; and in phyſiology, the ſame as phaſmata. See the articles PERSPECTIVE, PHÆNOMENON, PHASMATA, *&c.*

APPEASING MEDICINES, the ſame with paregorics or anodynes. See the article ANODYNE.

APPELLANT, in a general ſenſe, one who appeals. See the article APPEAL.

APPELLANTS, in church-hiſtory, an appellation given to ſuch of the roman catholic clergy, as appeal from the conſtitution *unigenitus*, to a general council.

APPELLATIVE, in grammar, a noun, or name, which is applicable to a whole ſpecies or kind, as *man*, *horſe*; in contradiſtinction to a proper name. See the articles NOUN, NAME, and GENERAL TERMS.

APPELLEE, among lawyers, the perſon againſt whom an appeal is brought. See the article APPEAL.

APPENNAGE. See the article APANAGE.

APPENDANT, in law, any thing that is inheritable, belonging to ſome more worthy inheritance; as an advowſon, common, or court, may be appendant to a manor, land to an office, *&c.* but land cannot be appendant to land, for both are corporeal inheritances, and one thing corporeal cannot be appendant to another.

APPENDI'CULA *Vermiformis*, in anatomy. On one ſide of the bottom of the cæcum lies an appendix, reſembling a ſmall inteſtine, nearly of the ſame length with the cæcum, but very ſlender. It is termed appendicula vermiformis from its ſuppoſed reſemblance to an earth-worm. Its common diameter is about a quarter of an inch. By one extremity it opens laterally, and a little obliquely, into the bottom of the cæcum; and the other extremity is cloſed, being ſometimes greater, and ſometimes ſmaller, than the reſt of the appendix.

It has ſome contortions like thoſe of a worm when it is touched, from whence comes the epithet of vermicularis, or vermiformis; and it may likewiſe be compared to the gills or pendants of a turky cock. In ſtructure it nearly reſembles that of the other inteſtines. The internal coat of this appendix is folliculous, like that of the duodenum; and it is likewiſe reticular, the maſhes being the glandular lacunæ, which continually diſcharge a fluid into its cavity.

It has been often diſputed whether this appendix, or the large portion, which is, as it were, the head of the colon, ought to be called the cæcum; but the general diviſion of the inteſtines into great and ſmall leaves no doubt of its being only an appendix in man, whatever reaſon there may be for talking differently with reſpect to brutes and birds.

APPENDIX, in literature, a treatiſe added at the end of a work, to render it more complete. See SUPPLEMENT.

APPENDIX, in anatomy, the ſame with *epiphyſis*. See the article EPIPHYSIS.

APPETITE, *appetitus*, in a general ſenſe, the deſire of enjoying ſome object, ſuppoſed to be conducive to our happineſs. When this inclination is guided by reaſon, and proportioned to the intrinſic value of the object, it is called rational appetite; as, on the other hand, it is denominated ſenſitive appetite, when we have only a blind propenſity to a thing, without determinate ideas of the good qualities for which we deſire it.

APPE-

APPETITE, in medicine, a certain painful or uneaſy ſenſation, always accompanied with a deſire to eat or drink.

An exceſſive appetite is called by phyſicians bulimy, or *fames canina*; a defect or loſs of it, anorexy; and that after things improper for food, pica. See the articles BULIMY, ANOREXY, &c.

APPLAUSE, *applauſus*, or *plauſus*, an approbation of ſomething ſignified by clapping the hands; in which ſenſe it is ſtill practiſed in colleges and theatres.

APPLE, a well-known fruit, conſiſting of a rind, pill, or ſkin; the pulp, or parenchyma; the branchery, or ſeed-veſſels; and the coare.

The apple is not only uſed as food, but likewiſe for making cyder. See CYDER.

APPLE is alſo an appellation given to ſeveral fruits, on account of their reſemblance to the common apple: ſuch are the bitter-apple, love-apple, mad-apple, &c. See the article BITTER-APPLE, &c.

APPLE *of the eye*, a name not unfrequently given to the pupil. See the articles EYE and PUPIL.

APPLEBY, the chief town of the county of Weſtmoreland, ſituated on the river Eden, in 2° 26′ weſt longitude, and 54° 30′ north latitude. It ſends two members to parliament.

APPLICATE, or *Ordinate* APPLICATE, in geometry. See ORDINATES.

APPLICATION, in a general ſenſe, is the laying two things together, in order to diſcover their agreement or diſagreement.

APPLICATION, in geometry, is uſed either for diviſion; for the fitting or applying one quantity to another, whoſe areas, but not figures, ſhall be the ſame; or for tranſferring a given line into a circle, or other figure, ſo that its ends ſhall be in the perimeter of the figure.

APPLICATION, among divines, a term uſed to ſignify the ſame as imputation. See the article IMPUTATION.

APPLY, or APPLYING, in geometry. See the article APPLICATION.

APPOGIATURA, in muſic, a ſmall note inſerted by the practical muſician, between two others, at ſome diſtance.

APPOINTE'E, a foot ſoldier, or officer in the french army, who receives a greater pay than others of the ſame rank, in conſideration of his valour or long ſervice.

APPOINTE'E, in heraldry, the ſame as aguiſee: thus we ſay, a croſs appointée, to ſignify that which has two angles at the end cut off, ſo as to terminate in points.

APPOINTMENT, a penſion given by princes and noblemen to retain certain perſons in their ſervice. See PENSION.

APPORTIONMENT, in law, the diviſion of a rent into parts, in the ſame manner as the land out of which it iſſues is divided: for example, if a perſon leaſes three acres of land for a certain rent, and afterwards grants away one acre thereof to another: the rent ſhall be apportioned between them. Conditions, however, are generally entire, and cannot be apportioned by an act of the party; neither can a contract be divided or apportioned ſo as to ſubject a man to two actions.

APPOSAL *of ſheriffs* ſignifies the charging them with money received on their accounts in the exchequer. See the article SHERIFF.

APPOSITION, in general, is the putting one thing by the ſide of another.

APPOSITION, in grammar, the placing two or more ſubſtantives together, in the ſame caſe, without any copulative conjunction between them; as, *ardebat Alexim delicias domini*.

APPRAISING, the valuing or ſetting a price on goods. This is uſually done by a ſworn appraiſer, who, if he values the goods too high, is obliged to take them at the price appraiſed.

APPREHENSION, in logic, the firſt or moſt ſimple act of the mind, whereby it perceives, or is conſcious of ſome idea: it is more uſually called perception. See the article PERCEPTION.

APPREHENSION, in law, is the ſeizing a criminal, in order to bring him to juſtice.

APPRENTICE, a young perſon bound by indenture to ſome tradeſman, in order to be inſtructed in the myſtery or trade. By the laws of England, a maſter may be indicted for not providing for, or for turning away his apprentice: and upon complaint from a maſter, that he neglects his duty, an apprentice may be committed to Bridewell, or be bound over to the ſeſſions. A duty of 6 d. in the pound is granted for every ſum of 50 l. or under, and 12 d. in the pound for ſums exceeding 50 l. given with all apprentices, except ſuch as are placed out by churchwardens, &c.

APPRENTICESHIP ſignifies either the condition of an apprentice, or the time he is bound to ſerve.

APPROACH, or APPROACHING, in a general ſenſe, the acceding or coming together of two or more things.

APPROACHES, in fortification, the works thrown

thrown up by the beſiegers, in or order to get nearer a fortreſs, without being expoſed to the enemies cannon: ſuch, in a more particular manner, are the trenches, which ſhould be connected by parallels, or lines of communication.

The beſieged frequently make counter-approaches, to interrupt and defeat the enemies approaches. See the article COUNTER-APPROACHES.

APPROACHING, in gardening, the inoculating, or ingrafting the ſprig of one tree into another, without cutting it off from the parent-tree. This is alſo called inarching. See the article INARCHING.

APPROACHING, in fowling, a method of getting near the birds by means of a machine, made of hoops and boughs of trees, within which the ſportſman conceals himſelf.

APPROBATION, is defined by Mr. Hutcheſon, a ſtate or diſpoſition of the mind wherein we put a value upon, or become pleaſed with ſome perſon or thing.

Moraliſts are divided on the principle of approbation, or the motive which determines us to approve and diſapprove. The Epicureans will have it to be only ſelf-intereſt; according to them, that which determines any agent to approve his own action, is its apparent tendency to his private happineſs; and even the approbation of another's action flows from no other cauſe but an opinion of its tendency to the happineſs of the approver, either immediately or remotely. Others reſolve approbation into a moral ſenſe, or a principle of benevolence by which we are determined to approve every kind affection either in ourſelves or others, and and all publicly uſeful actions, which we imagine to flow from ſuch affection, without any view therein to our own private happineſs.

APPROPRIARE COMMUNAM, in law, is to diſcommon; that is, to incloſe any parcel of land, that before was open and common. See the article COMMON.

APPROPRIARE AD HONOREM, to bring a manor within the liberty of an honour. See the article MANOR and HONOUR.

APPROPRIATE, in law. See the next article.

APPROPRIATION, the annexing a benefice to the proper and perpetual uſe of a religious houſe, biſhopric, college, &c. Where the king is patron, he may make appropriations himſelf; but in other caſes, after obtaining his licence in chancery, the conſent of the ordinary, patron, and incumbent is requiſite. Appropriations cannot be aſſigned over, but thoſe to whom they are granted may make leaſes of the profits.

APPROVEMENT, among old writers, is generally taken for the ſame as improvement; but in law is more particularly uſed for the incloſing part of a common by the lord of the manor.

If, however, there be not ſufficient common left for the tenant, he may have a writ of aſſize and recover triple damages: in ſuch a caſe alſo a commoner may break down the incloſures.

APPROVER, in law, one who, confeſſing that he has committed a felony, accuſes one or more of his accomplices. Approvers, moreover, ſignify bailiffs of lords in their franchiſes, ſheriffs, and likewiſe ſuch perſons as have the letting the king's demeſnes in ſmall manors. See BAILIFF, SHERIFF, DEMESNE.

APPROXIMATION, in arithmetic and algebra, the coming nearer and nearer to a root, or other quantity ſought, without expecting to be ever able to find it exactly. There are ſeveral methods for doing this, to be found in mathematical books, being nothing but infinitely converging ſeries, ſome approaching quicker, others ſlower towards the truth.

By ſuch an approximation the value of a quantity may be found, though not to the utmoſt degree of exactneſs, yet ſufficiently ſo for practice. Thus $\sqrt{2} = 1.41421356$, &c. = the approximating ſeries $1 + \frac{4}{10} + \frac{1}{100} + \frac{4}{10000} + \frac{2}{1000000} +$, &c. or ſuppoſing $x = \frac{1}{10}$, equal to the ſeries $1 \times \frac{4}{x} + \frac{1}{x^2} + \frac{4}{x^3} + \frac{2}{x^4} +$, &c.

$= 1 + 4x^{-1} + x^{-2} + 4x^{-3} + 2x^{-4} +$, &c.

Again, ſuppoſing $a^2 + b$ to be a non-quadrate number, and $a^3 + b$ to be a non-cubic one; then will $\sqrt{a^2 + b} = a + \frac{ab}{2a^2 + \frac{1}{2}b}$, and $\sqrt[3]{a^3 + b} = a + \frac{ab}{3a^3 + b} = \frac{1}{2}a + \sqrt{\frac{1}{4}a^3 + \frac{b}{3a}}$ nearly

There is a general method of inveſtigating the value of ſuch ſeries, for which See the article SERIES.

Mr. Mac-Laurin likewiſe delivers another method of approximation, *viz.* by the limits of the propoſed equation. See the articles LIMIT and EQUATION.

APPUI,

APPUI, in the manege, the ſenſe of the action of the bridle in the horſeman's hand. Thus we ſay, a horſe has no appui, when he cannot ſuffer the bit to bear never ſo little upon the parts of the mouth. To give a horſe a good appui, he ſhould be galloped, and put often back.

APPULSE, in aſtronomy, the approach of a planet towards a conjunction with the ſun, or any of the fixed ſtars. See the article CONJUNCTION.

The appulſes of the planets to the fixed ſtars have always been of great uſe to aſtronomers in order to fix the places of the former. The antients wanting an eaſy method of comparing the planets with the ecliptic, which is not viſible, had ſcarce any other way of fixing their ſituations, but by obſerving their tract among the fixed ſtars, and remarking their appulſes to ſome of thoſe viſible points.

Dr. Halley has publiſhed a method of determining the places of the planets, by obſerving their near appulſes to the fixed ſtars.

APPURTENANCES, in common law, ſignify things corporeal and incorporeal, that appertain to another thing as principal; as hamlets to a manor, and common of paſture and fiſhery. Things muſt agree in nature and quality to be appurtenant, as a turbary, or a ſeat in a church, to a houſe.

APRICOT, or APRICOCK, *armeniaca*, in botany, a ſpecies of prunus, with roſaceous flowers, and a delicious fleſhy fruit, of a roundiſh figure. See plate XIX. fig. 6. and the article PRUNUS.

APRIL, *aprilis*, in chronology, the fourth month of the year, containing only thirty days.

A PRIORI, a kind of demonſtration. See the article DEMONSTRATION.

APRON, in gunnery, the piece of lead which covers the touch-hole of a cannon. See the article CANNON.

APSIS, in aſtronomy, a term uſed indifferently for either of the two points of a planet's orbit, where it is at the greateſt or leaſt diſtance from the ſun or earth. Hence the line connecting theſe points, is called the line of the apſides. See the articles ORBIT and PLANET.

APSIS, among eccleſiaſtical writers, denotes the inner part of the antient churches, anſwering to the modern choir.

APSIS is alſo uſed for the biſhop's throne, and ſometimes for the ambo. See the article AMBO.

APTE, a ſmall city of Provence, in France, ſituated about twenty-five miles north of Aix, in 5° 20′ eaſt longitude, and 43° 50′ north latitude.

APTERIA, in the linnæan ſyſtem of zoology, the ſeventh and laſt order of inſects, the diſtinguiſhing characteriſtic of which is, that the inſects comprehended in it, have no wings: ſuch are the louſe, the flea, the podura, the monoculus, the acarus, the ſpider, the ſcorpion, and the crab. See the articles LOUSE, FLEA, &c.

APTHANE, a title antiently given to the higheſt degrees of nobility in Scotland. See the article THANE.

APTITUDE, a term ſometimes uſed to ſignify the fitneſs of a thing, to anſwer a certain purpoſe.

APTITUDE, or APTNESS, in a more limited ſenſe, is uſed for quickneſs or readineſs of genius.

APTOTE, ἄπτωτον, among grammarians, an indeclinable noun, or one which has no variation of caſes, as *fas*, *neſas*, &c.

APULIA, in geography. The eaſt ſide of the kingdom of Naples, which lies along the gulph of Venice, went antiently by this name, but is now known by the name of Capitanata, Terra di Barri, and Otranto.

APUS, in aſtronomy, a conſtellation of the ſouthern hemiſphere placed near the pole, between the triangulum auſtrale, and the chameleon, ſuppoſed to repreſent the bird of paradiſe.

There are four ſtars of the ſixth, three of the fifth, and four of the fourth magnitude, in the conſtellation apus.

Dr. Halley, in 1677, obſerved the longitude and latitude of the ſtars in apus, which Hevelius in his prodromus reduced with ſome alteration to the year 1700.

P. Noel has alſo given the places of theſe ſtars, with their right aſcenſions and declinations for the year 1687: but his obſervations differ widely from thoſe of Dr. Halley. Hevelius has repreſented the figure of apus, and its ſtars, in his firmamentum ſobieſcianum, according to Halley's account; Noel has done the like, according to his own account. Wolfius, with what juſtice we will not pretend to ſay, gives the preference to this laſt.

APYCNOS, in muſic, is ſaid of the diatonic genus, on account of its having ſpacious intervals, in compariſon of the chromatic and enharmonic. See the articles DIATONIC, CHROMATIC, &c.

APYREXY, ἀπυρεξία, among phyſicians, denotes the intermiſſion of a fever.

AQUA, WATER, a term frequently met with

with in the writings of phyſicians, chemiſts, &c. for certain medicines, or menſtruums, in a liquid form, diſtinguiſhed from each other by peculiar epithets, as *aqua alexiteria, aqua aluminoſa, aqua fortis*, &c.

AQUA ALEXITERIA, a water diſtilled from mint, ſea-wormwood, and angelica; and ſaid to be good in malignant and peſtilential caſes.

AQUA ALUMINOSA, ALUM-WATER, a ſolution of alum and white vitriol; eſteemed good in ulcers and cutaneous eruptions.

AQUA FORTIS, a corroſive liquor, being the red fumes which ariſe in diſtilling nitre and vitriol. This is a menſtruum for diſſolving all metals, except gold. It is uſed by dyers in dying ſcarlet; by refiners, for parting ſilver from gold; by book-binders, to marble the covers of books; by diamond-cutters, to ſeparate diamonds from metalline powders; by engravers, for etching on copper or braſs plates; by workers in moſaic work, and alſo for ſtaining woods, bone, ivory, &c.

AQUA MARINA, or AQUA MARINE, a name by which the jewellers call the beryl, on account of its ſea-green colour. See the article BERYL.

AQUA MERCURIALIS, a ſolution of ſublimate of mercury, and a little mercury, in *aqua regia*; by means of which the alchemiſts pretend to reduce all metals to their firſt principle, mercury.

AQUA OMNIUM FLORUM, in pharmacy, the water diſtilled from the dung of cows, when they go to graſs: in engliſh, all-flower-water.

AQUÆ PAVOR, in medicine. See the article HYDROPHOBIA.

AQUA REGIA, a kind of *aqua fortis*, or acid ſpirit, in which there is a ſmall proportion of ſea-ſalt. It is prepared ſeveral ways: the moſt common method is, by mixing common ſalt, ſal gem, or ſal ammoniac, whether native or factitious, with *aqua fortis*, or ſpirit of nitre. But as the baſis, or eſſential ingredient is common or ſea-ſalt, this will always anſwer the purpoſe, in whatever form applied, whether as a fluid or a ſolid, a liquor or a ſpirit.

Aqua regia is ſo called, becauſe it diſſolves gold: it will alſo diſſolve iron, copper, tin, mercury, regulus of antimony, biſmuth, and zink. It does not at all affect ſilver, provided the ſea-ſalt be mixed in a due proportion; but if the quantity is too ſmall, it then corrodes the ſilver.

AQUA SECUNDA, denotes *aqua fortis*, which has been uſed to diſſolve ſome metal.

AQUA SULPHURATA, the ſame with *gas ſulphuris*. See the article GAS.

AQUA VITÆ, the WATER OF LIFE, a name given to malt ſpirits, in contradiſtinction from brandy. See the articles BRANDY and SPIRIT.

AQUA VITRIOLICA COERULEA, a ſolution of blue vitriol and alum, with ſome ſpirit of vitriol, in water; recommended in inflammatory and putrid caſes.

AQUÆDUCT, in hydraulics and architecture, a conveyance made for carrying water from one place to another. Thoſe of the antient romans were ſurpriſingly magnificent. That which Lewis XIV. built near Maintenon, for carrying the Bucq to Verſailles, is perhaps the greateſt now in the world: it is ſeven thouſand fathoms long, with two thouſand five hundred and ſixty fathoms of elevation, and contains two hundred and forty-two arcades.

AQUÆDUCT, in anatomy, a term applied by anatomiſts, to certain canals, on account of their form or uſe: ſuch are the aquæduct of Fallopius, a canal ſituated between the apophyſes ſtyloides, and maſtoides; the aquæduct of Nuck, in the ſclerotic coat of the eye; and the aquæduct of Sylvius, in the brain, the poſterior ſurface of which is called its anus. See STYLOIDES, SCLEROTICA, &c.

AQUARIANS, *aquarii*, in church-hiſtory, an antient ſect of heretics, who, under pretence of abſtinence, made uſe of water inſtead of wine in the euchariſt.

AQUARIUS, in aſtronomy, a conſtellation, which makes the eleventh ſign in the Zodiac, marked thus, ♒. It conſiſts of forty-five ſtars in Ptolemy's catalogue, of forty in Tycho's, and in the Britannic catalogue of ninety-nine. It was called Aquarius, or the water-bearer, as ſome ſay, becauſe, during the ſun's motion through this ſign, it is generally rainy weather.—The poets tell us that Jupiter, having raviſhed Ganymede, carried her away into heaven, to ſerve as cup-bearer in the room of Hebe and Vulcan; whence the name.

AQUATIC, in natural hiſtory, an appellation given to ſuch things as live or grow in the water: thus we ſay, aquatic animals, aquatic plants, &c.

AQUEDUCT,

AQUEDUCT, the ſame with aquæduct. See the AQUÆDUCT.

AQUELEIA, a patriarchal city of Italy, near the end of the gulph of Venice, ſituated in 13° 30′ eaſt long. and 46° 20′ north latitude.

AQUEOUS, *aqueſus*, in a general ſenſe, ſomething partaking of the nature of water, or that abounds with it: thus we ſay, aqueous baths, ducts, &c. See the articles BATH and DUCT.

AQUEOUS HUMOUR, in anatomy, called alſo the albugineous humour, is the utmoſt of the three humours of the eye, and fills up both its cameræ. In this the uvea fluctuates as it were, and moves at liberty; this humour alſo, when loſt, will be repaired by nature.

AQUIFOLIUM, HOLLY, in botany. See plate XX. fig. 2. and the article HOLLY.

AQUILA, the EAGLE, in ornithology, See the article EAGLE.

AQUILA, in aſtronomy, a conſtellation of the northern hemiſphere, conſiſting of fifteen ſtars in Ptolemy's catalogue, of ſeventeen in Tycho's, and of ſeventy in the Britannic catalogue.

AQUILA, in geography, a large city of Abruzzo, in the kingdom of Naples, ſituated in 14° 20′ eaſt longit. and 42° 40′ north latitude.

AQUILEGIA, COLUMBINE, in botany, a genus of the polyandria pentagynia claſs of plants, having no calyx: the corolla conſiſts of five plane, patent, equal petals, of a lanceolate, ovate figure; the nectaria are five in number; they are equal, and ſtand alternately with the petals: the fruit conſiſts of five ſtrait, parallel, cylindric, accuminated capſules, each of which conſiſts of a ſingle valve. The ſeeds are numerous, oval, carinated, and adhere to the ſuture. See plate XX. fig. 1.

Aquilegia is recommended in diſorders of the breaſt and lungs, in malignant caſes, the menſes, &c.

AQUILICIUM, or AQUILICIANA, in roman antiquity, ſacrifices performed in times of exceſſive drought, to obtain rain of the gods.

AQUILINE, ſomething belonging to, or reſembling an eagle: thus, an aquiline noſe is one bent ſomewhat like an eagle's beak.

AQUINO, a ruinous city in the province of Lavoro, in the kingdom of Naples, ſituated in 14° 30′ eaſt longitude, and 41° 30′ north latitude.

AQUOSE, the ſame with aqueous. See the article AQUEOUS.

ARA, in aſtronomy, a ſouthern conſtellation, conſiſting of eight ſtars.

ARABET, a town of turkiſh Tartary, ſituated near the Palus Mœotis. It is fortified with two caſtles, and is the place where the kan keeps his ſtud of horſes, which are reckoned to be about ſeven thouſand in number.

ARABIA, a large country of Aſia, having Turky on the north, Perſia and the gulph of Perſia on the eaſt, the indian ocean on the ſouth, and the Red-ſea and iſthmus of Suez on the weſt; and ſituated between 35° and 60° eaſt longitude, and between 12° and 30° north latitude.

Arabia, though ſubject to a great many different princes, is only conſidered by geographers as ſubdivided into the three grand diviſions of Arabia Felix, Arabia Deſerta, and Arabia Petrea.

ARABIAN, or ARABIC, in a general ſenſe, ſomething belonging to Arabia: thus we ſay, arabian characters, arabian language, &c.

Gum ARABIC, the name of a gum which diſtils from a ſpecies of acacia, growing in Arabia and Egypt. It is very common among us, but little is to be met with genuine: that is accounted the beſt which is in ſmaller pieces, and almoſt of a white colour. It is good in all kinds of fluxes, particularly catarrhs.

ARABICI, a ſect of heretics, who held that the ſoul both dies and riſes again with the body.

ARABIS, in botany, a genus of the tetradynamia ſiliquoſa claſs of plants, the calyx of which is a deciduous perianthium, conſiſting of four ovato-oblong, acute, gibbous, concave leaves; the corolla conſiſts of four oval, patent, cruciform petals; the fruit is a very long compreſſed pod, containing ſeveral roundiſh compreſſed ſeeds.

ARABISM, in matters of language, an idiom peculiar to the arabian language.

ARABLE LANDS, thoſe which are fit for tillage, or which have been formerly tilled.

ARAC, ARRAC, or RACK. See the article RACK.

ARACAN, the capital city of a ſmall kingdom, ſituated on the north-eaſt part of the gulph of Bengal, in 93° eaſt long. and 20° 30′ north lat.

ARACARI, in ornithology, a braſilian bird of the *picæ* or magpye kind. The aracari is a ſpecies of ramphaſtos with a red rump. See plate XX. fig. 3.

ARACHIS, in botany, a genus of the diadelphia-decandria claſs of plants, the

flower of which is papilionaceous, and conſiſts of three petals; and its fruit is an oblong unilocular pod, contracted in the middle, and containing two oblong, obtuſe, and gibbous ſeeds.

ARACHNOIDES, in zoology, a name given to thoſe *echini marini*, or ſea-hedgehogs, which are of a circular form, but variouſly indented at the edges. See the article ECHINUS.

ARACHNOIDES, in anatomy, an appellation given to ſeveral different membranes, as the tunic of the cryſtalline humour of the eye, the external lamina of the pia mater, and one of the coverings of the ſpinal marrow.

ARÆOMETER, an inſtrument to meaſure the gravity of liquors, which is uſually made of a thin glaſs ball, with a taper neck, ſealed at the top, there being firſt as much mercury put into it as will keep it ſwimming in an exact poſture. The neck is divided into parts, which are numbered, ſo that by the depths of its deſcent into any liquor, its lightneſs may be known by theſe diviſions. The reader will find this inſtrument more particularly deſcribed under the article HYDROMETER.

ARÆOPAGUS, or AREOPAGUS. See the article AREOPAGUS.

ARÆOSTYLE, in architecture, a term uſed by Vitruvius, to ſignify the greateſt interval which can be made between columns, which conſiſts of eight modules, or four diameters. See MODULE.

ARÆOTICS, in medicine, remedies which rarefy the humours, and render them eaſy to be carried off by the pores of the ſkin.

ARAFAT, a mountain of Arabia, near Mecca, where the mahometans believe that Abraham offered to ſacrifice Iſaac.

ARAGON, a province of Spain, having Biſcay and the Pyrenean mountains on the north, Catalonia on the eaſt, Valencia on the ſouth, and the two Caſtiles on the weſt.

ARAIGNEE, in fortification, ſignifies the branch, return, or gallery of a mine. See the article MINE.

ARALIA, BERRY BEARING ANGELICA, in botany, a genus of the pentandria pentagynia claſs of plants, the flowers of which are collected into an umbel, of a globoſe figure, with a very ſmall involucrum; the perianthium is very ſmall, divided into five parts, and placed on the germen; the corolla conſiſts of five, ovato-acute, ſeſſile, reflex petals: the fruit is a roundiſh, coronated, ſtriated berry; having five cells: the ſeeds are ſingle, hard, and oblong.

ARANEA TUNICA, or ARANEOSA. See the article ARACHNOIDES.

ARANEUS, the SPIDER, in zoology. See the article SPIDER.

ARANJUEZ, a palace belonging to the king of Spain, beautifully ſituated on the bank of the Tagus, about fifteen or ſixteen miles eaſtward of Madrid.

ARARAT, the antient name for part of mount Caucaſus, between the Euxine and Caſpian ſeas.

ARAUCO, a city of Chili, in ſouth America, ſituated on a river of the ſame name, in 78° weſt lon. and 37° ſouth lat.

ARBE, an iſland in the gulph of Venice, ſituated near the coaſt of Morlachia, in 16° eaſt long. and 45° north lat.

ARBITER, in civil law, a judge nominated by the magiſtrate, or choſen voluntarily by two parties, in order to decide their differences according to law.

The civilians make this difference between arbiter and arbitrator: though both ground their power on the compromiſe of the parties, yet their liberty is different, for an arbiter is to judge according to the uſages of the law, but the arbitrator is permitted to uſe his own diſcretion, and accommodate the difference in the manner that appears to him moſt juſt and equitable.

ARBITRAGE, the ſame with arbitration. See the article ARBITRATION.

ARBITRARY, that which is left to the choice or determination of men, or not fixed by any poſitive law or injunction: thus arbitrary fines, are mulcts impoſed at the pleaſure of the court or judge. See the article AMERCIAMENT.

ARBITRARY POWER. See DESPOTICAL.

ARBITRATION, ARBITRAGE, or ARBITREMENT, a power given by two or more contending parties to ſome perſon or perſons to determine the diſpute between them. There are five things incident to an arbitration: 1. Matter of controverſy. 2. Submiſſion. 3. Parties to the ſubmiſſion. 4. Arbitrators. 5. Giving up the arbitration. Matters relating to a freehold, debts due on bond, and criminal offences are not to be arbitrated.

ARBITRATOR, a private extraordinary judge, choſen by the mutual conſent of parties, to determine controverſies between them. Arbitrators are to award what is equal between both parties, and the performance muſt be lawful and poſſible. An action of debt may be brought

for

for money adjudged to be paid by arbitrators.

ARBITREMENT. See the article ARBITRATION.

ARBOIS, a town of Franch Compte, in France, ſituated in 5° 40′ eaſt longitude, and 46° 50′ north latitude.

ARBON, a town of Swabia, in Germany, ſituated in 9° 30′ eaſt long. and 47° 40′ north latitude.

ARBOR DIANÆ. See the article DIANÆ ARBOR.

ARBOR GENEALOGICA. See the article GENEALOGICA ARBOR.

ARBOR LUNÆ, or ARBOR PHILOSOPHICA, the ſame with *arbor dianæ*.

ARBOR SCIENTIÆ, a general diſtribution or ſcheme of ſcience, or knowledge: ſuch is that annexed to the *Introduction* to this *Dictionary*.

ARBOR, in mechanics, the principal part of a machine which ſerves to ſuſtain the reſt: alſo the axis or ſpindle on which a machine turns, as the arbor of a crane, windmill, &c. See the articles CRANE, WINDMILL, &c.

ARBOREOUS, ſomething belonging to, or partaking of the nature of trees: thus moſſes, &c. growing on trees, are called arboreous.

ARBORESCENT, a term applied to all ſuch things as reſemble trees, thus we read of arboreſcent ſhrubs, arboreſcent animals, &c. of which laſt kind is that great natural curioſity the ſtar-fiſh.

ARBORIST, a perſon ſkilled in that part of botany, which treats of trees. See the the article BOTANY.

ARBOUR, in gardening, a kind of ſhady bower, formerly in great eſteem, but of late rejected, on account of its being damp and unwholeſome.

Arbours are generally made of lattice-work, either in wood or iron, and covered with elms, limes, hornbeams; or with creepers, as honeyſuckles, jaſmines or paſſion flowers; either of which will anſwer the purpoſe very well, if rightly managed.

ARBUTUS, the STRAWBERRY-TREE, in botany, a genus of the decandria monogynia claſs of plants, the calyx of which is a very ſmall obtuſe, permanent perianthium, divided into five ſegments: the corolla conſiſts of a ſingle oval petal, divided alſo into five ſegments; the fruit is a roundiſh berry, containing five cells, and ſmall oſſeous ſeeds. See plate XX. fig. 4.

ARC, ARK, or ARCH. See ARCH.

ARCA CORDIS, the ſame with *pericardium*. See the article PERICARDIUM.

ARCADIA, a ſea-port town of european Turky, ſituated on the weſtern coaſt of the Morea, in 22° eaſt longit. and 37° 20′ north lat.

ARCANUM, among phyſicians, a kind of remedy, the preparation of which is induſtriouſly concealed, in order to enhance its value: at preſent there are three remarkable remedies which paſs under that ſpecious name, *viz. arcanum corallinum*, *arcanum duplicatum*, and *arcanum joviale*.

The *arcanum corallinum* is a preparation of red precipitate, made by diſtilling it with the ſpirit of nitre, and repeating the diſtillation, again and again, till a fine red powder be procured. This powder, boiled in water, and the water poured off, and tartariſed ſpirit of wine put to the powder; two or three cohobations are made: which leave a powder much like the prince's powder; ſaid to be of great ſervice in the gout, dropſy, ſcurvy, &c. It operates chiefly by ſtool.

The *arcanum duplicatum* is prepared of the caput mortuum of aqua fortis, by diſſolving it in hot water, filtrating and evaporating it to a cuticle; and then leaving it to ſhoot. This is ſaid to be an admirable medicine in hypochondriacal caſes, in continued and intermitting fevers, in the ſtone, ſcurvy, &c. and is extolled as a diuretic and ſudorific.

The *arcanum joviale* is made of an amalgama of mercury and tin digeſted in ſpirit of nitre; the ſpirit being drawn off, the remaining matter is wetted with ſpirit of wine, and the ſpirit burnt away, and this for ſeveral times, till the pungent taſte is wholly gone; the remainder is uſed much with the ſame intentions as the antihecticum Poterii. See the article ANTIHECTICS.

ARCBOUTANT, in building, an arched buttreſs. See the article BUTTRESS.

ARCH, in geometry, any part of the circumference of a circle, or curved line, lying from one point to another, by which the quantity of the whole circle or line, or ſome other thing ſought after, may be gathered.

Similar ARCHES. If the arch B C (plate XX. fig. 5.) contains the ſame number of degrees as the arch D E; or if the radius A B is to the radius A D, as the arch B C to the arch D E; then theſe two arches are ſimilar.

Equal

Equal ARCHES, thoſe which contain the ſame number of degrees, and whoſe radii are equal.

Diurnal ARCH, that part of a circle deſcribed by a heavenly body, between its riſing and ſetting; as the nocturnal arch is that deſcribed between its ſetting and riſing: both theſe together are always equal.

ARCH *of progreſſion*, or *direction*, an arch of the Zodiac, which a planet ſeems to paſs over, when its motion is according to the ſigns.

ARCH *of retrogradation*, an arch of the Zodiac, deſcribed by a planet, while it is retrograde, or moves contrary to the order of the ſigns.

ARCH, in architecture, a concave building, with a mold bent in form of a curve, erected to ſupport ſome ſtructure. Arches are either circular, elliptical, or ſtrait, as they are improperly called by workmen. Circular arches are alſo of three kinds: 1. Semicircular, which have their center in the middle of a line drawn betwixt the feet of the arch. 2. Scheme, or ſkene, which are leſs than a ſemicircle, containing ſome ninety, and ſome ſeventy degrees. 3. Arches of the third and fourth point, conſiſting of two arches of a circle meeting in an angle at the top, being drawn from the diviſion of a chord into three or more parts at pleaſure.

Elliptical arches conſiſt of a ſemi-ellipſis, and have commonly a key-ſtone and impoſts: they are uſually deſcribed by workmen on three centers.

Strait arches are thoſe uſed over doors and windows, having plain ſtrait edges, both upper and under, which are parallel, but both the ends and joints point towards a center.

Triumphal ARCH, a ſtately gate of a ſemicircular form, adorned with ſculpture, inſcriptions, *&c.* erected in honour of thoſe who had deſerved a triumph.

ARCH is alſo uſed to denote the interval between two piers of a bridge. See BRIDGE.

ARCHÆUS, or ARCHEUS. See ARCHEUS.

ARCHANGEL, an angel occupying the eighth rank in the celeſtial hierarchy. See the article HIERARCHY.

ARCHANGEL, in botany, a name ſometimes given to the lamium. See the article LAMIUM.

ARCHANGEL, in geography, a city of the province of Dwina, in Ruſſia, ſituated four miles from the white-ſea, in 40° 12′ eaſt long. and 64° 30′ north lat.

ARCHBISHOP, a prelate who has ſeveral ſuffragan biſhops under him.

We have only two archbiſhops in England; the archbiſhop of Canterbury, who is primate of all England; and the archbiſhop of York, who is only ſtiled primate of England. The firſt eſtabliſhment of archbiſhops in England, according to Bede, was in the time of Lucius, ſaid to be the firſt chriſtian king in Britain; who, after the converſion of his ſubjects, erected three archbiſhoprics, *viz.* at London, York, and Landaff, then called Caerleon. The dignity of archbiſhop continued in the ſee of London 180 years, till it was tranſlated, in the time of the Saxons, to that of Canterbury, where it has continued ever ſince. And York continues ſtill a metropolitan ſee. The archbiſhopric of Caerleon was tranſlated to St. David's; but the plague raging very much in that country, it was removed to Doll in Bretagne, where that dignity terminated.

ARCHBISHOPRIC, in eccleſiaſtical geography, a province ſubject to the juriſdiction of an archbiſhop.

ARCHBUTLER, one of the great officers of the german empire, who preſents the cup to the emperor, on ſolemn occaſions. This office belongs to the king of Bohemia.

ARCHCHAMBERLAIN, an officer of the empire, much the ſame with the great chamberlain in England. The elector of Brandenburg was appointed, by the golden bull, archchamberlain of the empire.

ARCHCHANCELLOR, an high officer, who, in antient times, preſided over the ſecretaries of the court. Under the two firſt races of the kings of France, when their territories were divided into Germany, Italy, and Arles, there were three archchancellors; and hence the three archchancellors ſtill ſubſiſting in Germany, the archbiſhop of Mentz being archchancellor of Germany, the archbiſhop of Cologn of Italy, and the archbiſhop of Treves of Arles.

ARCHCHANTOR, the preſident of the chantors of a church.

ARCHDEACON, an eccleſiaſtical dignitary or officer, next to a biſhop, whoſe juriſdiction extends either over the whole dioceſe, or only a part of it.

We have ſixty archdeacons in England, who viſit the pariſhes ſubject to their juriſdiction; enquire into abuſes, ſuſpend, excommunicate, *&c.* They likewiſe induct all clerks into their benefices.

ARCH-

ARCHDUKE, a title given to dukes of greater authority and power than other dukes. The archduke of Auſtria is among the moſt antient: his principal privileges are, that he ſhall diſtribute juſtice in his own country, without appeal; that he cannot be deprived of his countries, even by the emperor and the ſtates of the empire; and that he have a power of creating counts, barons, *&c.* throughout the whole empire. See the article DUKE.

ARCHED, in a general ſenſe, denotes ſomething built or conſtructed in the faſhion, or after the manner, of an arch.

ARCHED SKENE. See the article ARCH.

ARCHED LEGS, a fault in a horſe, when his knees are bended arch-wiſe.

This expreſſion relates to the fore quarters, and the infirmity happens to ſuch horſes as have their legs ſpoiled with travelling.

ARCHER, in the antient military art, one who fought with bows and arrows.

The engliſh archers were eſteemed the beſt in Europe, to whoſe proweſs and dexterity the many victories over the French were in a great meaſure owing.

ARCHES, or *Court of* ARCHES, the ſupreme court belonging to the archbiſhop of Canterbury, to which appeals lie from all the inferior courts within his province.

ARCHETYPE, the firſt model of a work, which is copied after to make another like it. Among minters it is uſed for the ſtandard weight by which the others are adjuſted. The archetypal world, among platoniſts, means the world as it exiſted in the idea of God, before the viſible creation.

ARCHEUS, among chemiſts, an obſcure term uſed generally to denote the predominating principle of things, whereby their peculiar qualities are fixed and determined.

ARCHILOCHIAN, a term in antient poetry applied to a ſort of verſes, of which Archilochus was the inventor, conſiſting of ſeven feet, the four firſt whereof are ordinarily dactyls, though ſometimes ſpondees, the three laſt troches: as in Horace,

Solvitur acris hyems, gratâ vice veris & Favoni.

Theſe verſes are alſo called dactylic, becauſe of the four dactyls at the beginning. It is uſual to mix iambics of ſix feet wanting a ſyllable, alternately with Archilochians, as in the above ode.

ARCHIPELAGO, in geography, a general term for a ſea interrupted with iſlands; but more eſpecially denoting that between Greece and Aſia.

ARCHITECT, a perſon ſkilled in architecture, who not only draws the plans of edifices, but ſuperintends and directs the artificers.

ARCHITECTONIC, that which regularly produces a thing, according to its nature and properties.

Thus that power, whatever it be, which produces living creatures from the ova of females, is, by ſome, called the architectonic ſpirit.

ARCHITECTURE, the art or ſcience of erecting edifices, whether for habitation or defence; and hence ſubdivided into civil, military, and naval.

Civil ARCHITECTURE, called abſolutely, and by way of eminence, architecture, teaches how to make any kind of buildings, as palaces, churches, private houſes, *&c.* and the rules to be obſerved in it are ſolidity, convenience, and beauty, to which ſome add, order, diſpoſition, proportion, decorum, and œconomy. Solidity implies the choice of a good foundation, and ſound materials; convenience conſiſts in ſo ordering the parts of an edifice that they may not embarraſs one another; beauty is that agreeable form and pleaſing appearance, which it exhibits to the eye of a ſpectator; order gives each part of the building a convenient bigneſs, whether conſidered apart, or with relation to the whole; and diſpoſition is the agreeable union of all the parts. Proportion is the relation that all the work hath to its parts, and which every one ſeparately hath to the whole; decorum teaches to have a regard to deſign, cuſtom, and nature; and œconomy to conſider the expences, in order to regulate the form and magnitude of the fabric.

With reſpect to the ſeveral periods and ſtates of architecture, it is diſtinguiſhed into antient, gothic, and modern. The Greeks and Romans were ſo happy in adjuſting the various proportions of an edifice, that any neglect of their rules has been found to be a deviation from proportion and beauty itſelf. It is for this reaſon that the moderns have retrieved the primitive ſimplicity of antient architecture, which, upon the decline of the weſtern empire, was loſt in the general confuſion of arts and ſciences, being ſucceeded by the gothic and moreſk, ſo called from the Goths and Moors. Theſe made perfection to conſiſt in the delicacy and

and multitude of the ornaments, which they beſtowed on their buildings, with abundance of care, as may be ſeen in moſt of the antient ſtructures in England and other parts of Europe.

The manner then, of the antients being reputed the ſtandard of beauty and grandeur, another diviſion of architecture ariſes from the different proportions obſerved by them in different buildings; according to the bulk, ſtrength, delicacy, richneſs, or ſimplicity required. This conſiſts of five orders, all invented at different times, and on different occaſions, *viz.* tuſcan, doric, ionic, corinthian, and compoſite. See the articles ORDER, TUSCAN, DORIC, *&c.*

Of all the antient writers of architecture, Vitruvius is the only intire author.

The moſt celebrated of thoſe who have treated that ſubject, ſince his time, are Baptiſta Alberti, Palladio, Scamozzi, Blondel, Goldman, Mr. Perault, Sir H. Wotton, Sturmius, and Wolfius.

Military ARCHITECTURE, the ſame with what is otherwiſe called fortification. See the article FORTIFICATION.

Naval ARCHITECTURE, the art of building ſhips. See *Conſtruction of* SHIPS.

Counterfeit ARCHITECTURE, that which conſiſts of projectures, painted in black or white, or in colours after the manner of marble, which is alſo called ſcene-work, in the painting of columns, *&c.* for the decoration of theatres.

ARCHITECTURE, in perſpective, a ſort of building, the members of which are of different modules, and diminiſh proportionably to their diſtance, in order to make the work appear longer to the view than it really is.

ARCHITRAVE, in architecture, that part of a column, or order of columns, which lies immediately upon the capital; being the loweſt member of the entablature, and ſo called from its repreſenting the principal beam in timber-buildings. See the article ENTABLATURE.

Over a chimney, this member is called the mantle-piece; and over doors or windows, the hyperthyron.

Authors are very different in their dimenſions of architraves, and even with regard to the number of members it is compoſed of.

The tuſcan architrave, according to Vitruvius, ſhould conſiſt of two faſciæ and a cymatium, and be half a module in height.—The doric ſhould be of the ſame height as the tuſcan, and conſiſt of a tænia and five faſciæ.——The ionic ſhould be compoſed of three faſciæ and a cymatium, and of the ſame height as before. The corinthian architrave ſhould be allowed a greater altitude than the former, and conſiſt of a cymatium and five faſciæ. The compoſite architrave, frieze, and corniſh he makes of an equal height, and each equal to the diameter of the column juſt under the capital, which is ten twelfths of a module.

ARCHITRAVE *Doors*, are thoſe which have an architrave on the arch, if the top be curved; but, if ſtraight, upon the cap-piece.

ARCHITRICLINUS, Αρχιτρικλινος, in antiquity, the maſter or director of a feaſt, charged with the order and œconomy of it, the covering and uncovering of the tables, the command of the ſervants, and the like.

The word architriclinus properly imports the chief or maſter of a triclinium or dining room. His office properly differed from that of *modimperator*, or *arbiter bibendi*, as the latter was appointed by the gueſts, the architriclinus by the perſon who gave the feaſt.

ARCHITYPE. See the article ARCHETYPE.

ARCHIVAULT, in architecture, the inner contour of an arch, or a band adorned with mouldings running over the faces of the arch-ſtones, and bearing upon the impoſts. It has only a ſingle face in the tuſcan order, two faces crowned in the doric and ionic, and the ſame mouldings with the architrave in the corinthian and compoſite.

ARCHIVE, or ARCHIVES, an apartment, in which are depoſited the records, charters, and other papers of a ſtate or community. The archives of the court of chancery are in the rolls office.

ARCHMARSHAL, the grand marſhal of the empire, a dignity belonging to the elector of Saxony.

ARCHON, αρχων, in grecian antiquity, the chief magiſtrate of Athens, after the aboliſhing of monarchy; and alſo, the appellation given to ſeveral officers, both civil and religious, under the greek empire. Thus we read of the archon of the goſpel, the archon of the walls, *&c.*

ARCHONTICI, in church-hiſtory, a branch of Valentinians, who maintained that the world was not created by God, but by angels called archontes.

ARCH-

ARCHPRIOR, a name by which the maſter of the order of the knights-templars was ſometimes called.

ARCHTREASURER, the great treaſurer of the german empire, a dignity belonging to the duke of Brunſwic, king of Great Britain, but alſo claimed by the elector palatine.

ARCO, a town in the biſhoprick of Trent in Italy, ſituated about ſixteen miles ſouth weſt of Trent, in 10° 46′ eaſt longitude, and 46° north latitude.

ARCTIC, *arcticus*, in aſtronomy, an epithet given to the north pole, and likewiſe to a circle of the ſphere, parallel to the equator, and twenty-three degrees thirty minutes diſtant from the north pole. See the article POLE.

ARCTIUM, the BURDOCK, in botany, a genus of the ſyngeneſia polygamia æqualis claſs of plants; the common calyx of which is globoſe, and imbricated; the compound flower is tubulated and uniform, with equal hermaphrodite corollulæ: the proper flower is monopetalous and tubulous, with a ſlender and very long tube; there is no pericarpium; the cup is connivent, and the ſeed ſingle, vertically pyramidical, and crowned with a ſimple down ſhorter than the ſeed.

The roots, leaves and ſeeds of this plant are uſed in medicine, and ſaid to be ſub-aſtringent and diuretic, and good in the aſthma, ſpitting of blood, &c. The ſeed is eſteemed a powerful lithontriptic.

ARCTOPHYLAX, a conſtellation otherwiſe called boötes. See BOÖTES.

ARCTOPUS, in botany, a genus of the polygamia dioecia claſs of plants, the general umbel of which is long and unequal; the partial umbel is ſhorter; the involucra conſiſt of five leaves; the corolla of five petals: the fruit is ſingle and bilocular, and ſtands under the receptacle of the floſcule: the ſeed is ſingle, cordated and acuminated.

ARCTOTIS, in botany, a genus of the ſyngeneſia polygamia neceſſaria claſs of plants, the common calyx of which is roundiſh and imbricated; the compound flower is radiated; the hermaphrodite corollulæ are tubulous and numerous in the diſk: the proper hermaphrodite flowers are funnel-ſhaped; there is no pericarpium; the ſeed is ſingle, roundiſh and hairy.

ARCTURUS, a fixed ſtar of the firſt magnitude, in the ſkirt of boötes.

ARCTUS, *arctos*, in aſtronomy, the greek name for the urſa major and minor. See the article URSA.

ARCUATION, in gardening, the raiſing of trees by layers, which is done thus: Strong mother plants, or ſtools, muſt be planted in a clean border in a ſtraight line, ſix feet aſunder; and when they have ſhot five or ſix main branches from the root, and as many collateral branches, theſe main branches muſt be bent to the ground; for which reaſon, ſome cut them half through, and peg them faſt down.

The ſmall branches muſt be covered three inches thick upon the joints, and have a large baſon of earth made round them to hold the water.

Some perſons give the branches a twiſt, to make them root the ſooner.

ARCUATION, in ſurgery, denotes a diſtortion or incurvation of the bones, as happens in the rickets, &c.

ARCUTIO, *arcuccio*, a machine conſiſting of hoops uſed in Florence by nurſes, in order to prevent the child from being overlaid. Every nurſe is obliged to lay her child in an arcutio, under pain of excommunication.

ARDEA, the HERON, in ornithology, a genus of long-beaked birds; diſtinguiſhed from all others by having the middle toe of each foot ſerrated, or jagged, with a ſeries of ſcales on its outer ſide. This genus comprehends likewiſe the bittern, ſtork, crane, &c.

ARDENBURG, a fortified town of dutch Flanders, ſituated about twelve miles north eaſt of Bruges, in 3° 20′ eaſt longitude, and 51° 15′ north latitude.

ARDENNE, a foreſt in Germany, lying between Thionville and Liege.

ARDENT, *ardens*, ſomething that is extremely hot, as if on fire: thus, we ſay, an ardent fever, &c. See FEVER.

ARDERS, among farmers, denotes the fallowings, or ploughings of grounds. See the article FALLOWING.

ARDEVIL, or ARDEBIL, the burying place of ſome of the antient kings of Perſia, ſituated in 64° 20′ eaſt longitude, and 36° north latitude.

ARDRES, a town of the province of Picardy in France, ſituated about ten miles ſouth of Calais, in 2° eaſt longitude, and 50° 45′ north latitude.

ARDRES, or ARDRA, is alſo the capital of a country on the ſlave coaſt of Guinea in Africa, ſituated near the river Lagos, in 4° eaſt longitude, and 5° north latitude.

AREA, in geometry, denotes the ſuperficial content of any figure; thus, if we ſuppoſe a parallelogram ſix inches long,

and four broad, its area will be $6 \times 4 = 24$ ſquare inches.

The method of finding the areas of different figures, as triangles, circles, &c. will be given under the articles TRIANGLE, CIRCLE, &c.

AREA, among phyſicians, the ſame with the alopecia. See the article ALOPECIA.

AREBON, a town of Guinea in Africa, ſituated at the mouth of the river Formoſa, in 4° eaſt long. and 5° north lat.

ARECA, in botany, a genus of plants, the characters of which are not perfectly aſcertained; the calyx of the male flower is a bivalve ſpatha, the ſpadix is ramoſe; the corolla conſiſts of three acuminated petals; the ſtamina are nine filaments, of which the three exterior ones are the longeſt; the female flowers are in the ſame ſpadix and ſpatha: the corolla is like the male corolla; the fruit is a ſub-oval fibroſe drupe, ſurrounded at the baſe with an imbricated calyx, and containing an oval ſeed.

This plant is a kind of palm tree, that grows naturally in the Eaſt Indies, where it is regarded as a ſtrengthener of the ſtomach, and ſuppoſed to carry off every thing that might corrupt the gums.

AREMBERG, a city of Germany, ſituated about twenty-five miles ſouth of Cologn, in 6° 25′ eaſt longitude, and 50° 30′ north latitude.

ARENA, SAND, in natural hiſtory. See the article SAND.

ARENA, in roman antiquity, a place where the gladiators fought: ſo called from its being always ſtrewed with ſand, to conceal from the view of the people, the blood ſpilt in the combat.

ARENARIA, comprehending the ſmall MANY-STALKED CHICKWEED, and the PURPLE SPURREY, in botany, is a genus of the decandria digynia claſs of plants; the calyx is a perianthium conſiſting of five oblong, acuminated, patent and permanent leaves; the corolla conſiſts of five oval petals; the fruit is an oval covered capſule, containing one cell, in which are ſeveral kidney-ſhaped ſeeds.

ARENATION, *arenatio*, a kind of dry bath, wherein the patient ſits with his bare feet on hot ſand.

AREOMETER, or ARÆOMETER. See the article ARÆOMETER.

AREOLA, among anatomiſts, the coloured circle ſurrounding the nipple of the breaſt.

AREOPAGUS, or ARÆOPAGUS, ἀρειος πάγος, in grecian antiquity, a ſovereign court at Athens, ſo famous for the juſtice and impartiality of its decrees, that the gods themſelves are ſaid to have ſubmitted their quarrels to its determination.

AREOSTYLE, or ARÆOSTYLE. See the article ARÆOSTYLE.

AREOTICS, or ARÆOTICS. See the article ARÆOTICS.

AREQUIPPA, a city of Peru, in ſouth America, ſituated in 73° weſt longitude and 17° ſouth latitude.

ARETHUSA, in botany, a genus of the gynandria decandria claſs of plants, having no other calyx than a foliaceous ſpatha: the corolla is ringent and conſiſts of five oblong, ſub-equal petals: the nectarium conſiſts of a ſingle leaf, divided into two ſegments; the fruit is an oblong oval capſule, conſiſting of three valves, and containing one cell, in which are ſeveral ſeeds.

ARETIA, in botany, a genus of the pentandria monogynia claſs of plants, the calyx of which is a perianthium, conſiſting of a ſingle campanulated, ſemiquinquefid, and permanent leaf, without any involucrum: the corolla conſiſts of a ſingle petal, the tube is oval, and of the length of the cup; the limb is divided into four ſegments; and the fruit is a capſule, in which are contained many ſeeds.

AREZZO, a city of Tuſcany, in Italy; ſituated in 12° 15′ eaſt longitude, and 43° 15′ north latitude.

ARGEA, or ARGEI, in roman antiquity, thirty human figures, made of ruſhes thrown annually by the prieſts or veſtals into the Tiber, on the day of the ides of May.

ARGEMONE, in botany, a genus of the polyandria monogynia claſs of plants, the calyx of which is a roundiſh ſpatha, compoſed of three hollow pointed deciduous leaves: the corolla conſiſts of of three roundiſh, erecto-patent petals, larger than the cup: the fruit is an oval pentangular capſule, containing one cell, and ſeeming as if formed of five valves; the ſeeds are numerous and very ſmall; the receptacles are linear, and grow to the angles of the pericarpium: they do not burſt.

ARGENT, in heraldry, the white colour in the coats of gentlemen, knights, and baronets: the white in the arms of the ſovereign princes is called luna, and that in the arms of the nobility pearl: this is expreſſed in engraving, by the parts being left plain, without any ſtrokes from the

the graver. See plate XX. fig. 7.

ARGENTARIA, CRETA, in natural hiſtory, a perfectly pure white earth, found in Pruſſia, and much eſteemed for cleaning plate.

ARGENTIERE, a ſmall iſland in the Archipelago, ſituated about ſixty miles eaſt of the Morea, in 25° eaſt longitude, and 37° north latitude.

ARGENTINA, in ichthyology, a genus of malacopterygious fiſhes, with an oblong cylindrical body, and teeth on the tongue and palate.

ARGENTON, a town of France, ſituated about forty-five miles ſouth-weſt of Bourges, in 1° 35′ eaſt longitude, and 46° 40′ north latitude.

ARGENTUM, SILVER, in natural hiſtory. See the article SILVER.

ARGILLA, CLAY, in natural hiſtory. See the article CLAY.

ARGO, in aſtronomy, a conſtellation of fixed ſtars in the ſouthern hemiſphere, whoſe number of ſtars in Ptolemy's catalogue is 8, in Tycho's 11, and in Mr. Flamſteed's 25. See CONSTELLATION.

ARGONAUTS, in grecian antiquity, a company of illuſtrious Greeks, who embarked along with Jaſon in the ſhip Argo, on an expedition to Colchis, with a deſign to obtain the golden fleece: Hence,

ARGONAUTIC EXPEDITION, in chronology. See the article EPOCHA.

ARGOS, a ſea-port town of european Turky, in the Morea, ſituated on the bay of Napoli de Romania, in 23° eaſt longitude, and 37° 30′ north latitude.

ARGUMENT, *argumentum*, in rhetoric and logic, an inference drawn from premiſes, the truth of which is indiſputable; or at leaſt highly probable.

The arguments of orators receive particular denominations, according to the topics from whence they are derived; thus, we meet with arguments from affection, which intereſt the paſſions of the perſon to whom they are addreſſed; alſo with arguments *a tuto*, *ad ignaviam*, *ab invidia*, &c.

In reaſoning, Mr. Locke obſerves, that men ordinarily uſe four ſorts of arguments. The firſt is to alledge the opinions of men, whoſe parts and learning, eminency, power, or ſome other cauſe, has gained a name, and ſettled their reputation in the common eſteem, with ſome kind of authority; this may be called *argumentum ad verecundiam*. Secondly, another way is to require the adverſaries to admit what they alledge as a proof, or to aſſign a better; this he calls *argumentum ad ignorantiam*. A third way is, to preſs a man with conſequences, drawn from his own principles or conceſſions; this is known by the name of *argumentum ad hominem*. Fourthly, the uſing proofs drawn from any of the foundations of knowledge or probability; this he calls *argumentum ad judicium*; and obſerves, that it is the only one of all the four, that brings true inſtruction with it, and advances us in our way to knowledge. For, 1. It argues not another man's opinion to be right, becauſe I, out of reſpect, or any other conſideration, but that of conviction, will not contradict him. 2. It proves not another man to be in the right way, nor that I ought to take the ſame with him, becauſe I know not a better. 3. Nor does it follow, that another man is in the right way, becauſe he has ſhewn me, that I am in the wrong; this may diſpoſe me, perhaps, for the reception of truth, but helps me not to it; that muſt come from proofs and arguments, and light ariſing from the nature of things themſelves, not from my ſhamefacedneſs, ignorance, or error. See the articles REASON and REASONING.

The arguments of logicians are the ſyllogiſm, enthymem, induction, &c. See the article SYLLOGISM, &c.

ARGUMENT, in aſtronomy, denotes a known arch, by means of which we ſeek another one unknown.

The argument of the moon's latitude is her diſtance from the node; and the argument of inclination is an arch of a planet's orbit, intercepted between the aſcending node, and the place of the planet from the ſun, numbered according to the ſucceſſion of the ſigns.

ARGUMENT *of the moon's menſtrual longitude*, or *menſtrual* ARGUMENT *of the longitude*, is an arch of the excentric circle of the moon, intercepted between her true place, once equated, and a right line drawn through the center of the excentric parallel to the menſtrual line of the apſides. See APSIS and MOON.

ARGUMENT, in matters of literature, denotes alſo the abridgment or heads of a book, hiſtory, comedy, chapter, &c. See the article SYLLABUS.

ARGUMENTATION, the act of him who argues, and the manner of framing arguments. See the article ARGUMENT.

ARGUN, a river of Tartary in Aſia, ſerving as a boundary between the chineſe and ruſſian empires.

ARGUN is alſo a city of aſiatic Tar-

tary, ſituated on the above river, in 104° eaſt longitude, and 51° 30′ north latitude.

ARGUS-SHELL, a ſpecies of porcelain-ſhell, beautifully variegated with ſpots, reſembling, in ſome meaſure, thoſe in a peacock's tail. See PORCELAIN SHELL.

ARGYLESHIRE, a county of Scotland, lying weſtward of Glaſgow, and comprehending the countries of Lorn, Cowal, Knapdale, Kintyre, together with the iſlands Mull, Jura, Iſla, &c. It gives the title of duke to the noble family of Campbell.

ARGYROPOEIA, among alchemiſts, a pretended art of tranſmuting, or changing other metals into ſilver.

ARHUSEN, a city of Jutland, in Denmark, ſituated at the entrance of the Baltic-ſea, in 10° 20′ eaſt longitude, and 56° north latitude.

ARIANO, a town of the kingdom of Naples, and province of Principata, ſituated about fifteen miles eaſt of Benevento, in 15° 35′ eaſt longitude, and 41° 16′ north latitude.

ARIANS, in church hiſtory, a ſect of antient heretics, who denied the three perſons in the holy trinity to be of the ſame eſſence, and affirmed Chriſt to be a creature; that he was inferior to the father as to his deity; that he was neither co-eternal, nor co-equal with him; alſo, that the holy ghoſt was not God, but a creature of the ſon. In their doxologies, they aſcribed glory to the father in the ſon, through the holy ghoſt.

ARICA, a ſea-port town of Peru, in ſouth America, ſituated on the pacific ocean, in 70° 20′ weſt longitude, and 18° 20′ ſouth latitude.

ARIES, RAM, in zoology. See RAM.

ARIES, in aſtronomy, a conſtellation of fixed ſtars, drawn on the globe in the figure of a ram. It is the firſt of the twelve ſigns of the zodiac, from which a twelfth part of the ecliptic takes its denomination. It is marked thus ♈, and conſiſts of ſixty-five ſtars.

ARIES, the battering ram, in antiquity. See the article RAM.

ARISARUM, in botany, the name by which two diſtinct genuſes of plants, the calla and arum of Linnæus, are called. See the article CALLA, &c.

The ariſarum of Tournefort has a hooded kind of flower, from whence its engliſh name Friars coul.

The flower and leaves, applied in the way of ointment, are deterſive and vulverary; and the roots, taken in powder, are reckoned good in malignant caſes.

ARISTA, among botaniſts, a long needle-like beard, which ſtands out from the huſk of a grain of corn, graſs, &c.

ARISTIDA, in botany, a genus of the triandria digynia claſs of plants, the calyx of which is a bivalve ſubulated glume, of the length of the corolla; the corolla is a glume of one valve opening longitudinally, hairy at the baſe, and terminated by three ſub-equal patulous ariſtæ; the fruit is a connivent glume, containing a naked filiform ſingle ſeed, of the length of the corolla.

ARISTOCRACY, a form of government where the ſupreme power is veſted in the principal perſons of the ſtate, either on account of their nobility, or their capacity and probity. The republic of Venice is an ariſtocracy.

ARISTOLOCHIA, BIRTH-WORT, in botany, &c. See BIRTH-WORT.

ARISTOTELIAN, ſomething relating to Ariſtotle: thus we read of the ariſtotelian philoſophy, ſchool, &c. See the article PERIPATETICS.

ARISTOTELIAN WHEEL, *rota ariſtotelica*. See the article ROTA.

ARITHMETIC, the art or ſcience of numbering; being that branch of pure mathematics, which treats of the powers and properties of numbers.

Proclus, in his commentary upon the firſt book of Euclid, ſays, that the Phœnicians, by reaſon of their traffic and commerce, were thought to be the firſt inventors of arithmetic, which Pythagoras and his followers, as alſo the Ægyptians, Greeks, and Arabians afterwards much improved, as Clavius and others tell us. But if we are to judge of the knowledge of theſe antients in arithmetic, from their writings upon the ſubject, which have been tranſmitted to us, we may ſafely conclude, that their advances herein were but very ſhort and ſcanty. For, ſetting aſide Euclid, who indeed has given ſeveral very plain and pretty properties of numbers in his *Elements*, and Archimedes in his *Arenar*, they moſtly conſiſt in dry diſagreeable diſtinctions and diviſions of numbers; as may be ſeen in Nicomachus's, and Boetius's arithmetic.

Nor is the Greek manner of numeration, by the letters of the alphabet, at all fit for the performance of the practical part of multiplication, diviſion, &c. with the eaſe and expedition that they are now-a-days performed by the Indian figures or nine digits.

Dr.

Dr. Wallis, in his hiſtory of algebra, ſays, that there are at Oxford two arithmetical manuſcripts of Johannes de Sacro Boſco, who died about the year 1250, wherein the operations of addition, ſubtraction, multiplication, diviſion, and extraction of the ſquare and cube roots, are performed much the ſame as now.

Boetius's arithmetic was wrote in the ſixth century. And in the ninth century Pſellius wrote a compendium of the antient arithmetic in Greek, which was tranſlated into latin by Xylander, and publiſhed anno 1556, at Baſil.

The fundamental rules, or operations, of arithmetic, are four, *viz.* addition, ſubſtraction, multiplication, and diviſion; the practice of each of which is given under the heads ADDITION, SUBSTRACTION, *&c.*

But beſides theſe, there are other rules contrived for facilitating computations of all kinds; ſuch is the rule of proportion, rule of three, or golden-rule, as it is called; alſo, the rules of fellowſhip, intereſt, reduction, extraction of roots, barter, *&c.* all which will be delivered under the ſeveral heads PROPORTION, INTEREST, *&c.*

The number of books on arithmetic is very great. Wingate, Cocker, Leybourn, Hill, Pardon, *&c.* have written practical treatiſes of it; but by far the moſt complete ſyſtem, in our, or perhaps in any other language, is that of Mr. Malcolm.

Binary ARITHMETIC. See BINARY.

Common ARITHMETIC, beſides that of integers, already deſcribed, comprehends vulgar fractions. See FRACTION.

DECADAL, that performed by nine figures and a cypher, taken, no doubt, from the number of our fingers. See the article NUMERATION.

Decimal ARITHMETIC, that containing the doctrine of decimal fractions. See the article DECIMAL.

Dyadic ARITHMETIC, the ſame with the binary. See the article BINARY.

Harmonical ARITHMETIC. See the article HARMONICAL.

ARITHMETIC *of Infinites*, the doctrine of infinite ſeries. See the article SERIES.

Inſtrumental ARITHMETIC, that performed by means of inſtruments, as the abacus, or counting-board, napier's bones, *&c.* See ABACUS, NAPIER'S BONES, *&c.*

Literal ARITHMETIC, the ſame with *ſpecious*. See the article ALGEBRA.

Logarithmetical ARITHMETIC, that performed by means of logarithms. See the article LOGARITHM.

Logiſtical ARITHMETIC, the ſame with *ſexageſimal*.

Numerous ARITHMETIC, the ſame with *decadal*.

Political ARITHMETIC. See POLITICAL.

ARITHMETIC of rationals and irrationals. See the article RATIONAL.

Sexageſimal ARITHMETIC, the doctrine of ſexageſimal fractions. See the article SEXAGESIMAL.

Specious ARITHMETIC, the ſame with algebra. See the article ALGEBRA.

Tetractical ARITHMETIC, that wherein only 1, 2, 3, and 0 are uſed.

ARITHMETICAL, in a general ſenſe, ſomething belonging to arithmetic. See the preceding article.

ARITHMETICAL *complement of a logarithm*, the ſum or number which a logarithm wants of 10,000000; thus the arithmetical complement of the logarithm 8.154032 is 1.845968.

ARITHMETICAL *mean*, or *medium*. See the article MEDIUM.

ARITHMETICAL *muſic*, is that part of the ſcience of muſic, which conſiders the relations of ſounds and numbers. See the article MUSIC.

ARITHMETICAL *progreſſion*. See the article PROGRESSION.

ARITHMETICAL *proportion*. See the article PROPORTION.

ARITHMETICAL *ratio*. See RATIO.

ARITHMOMANCY, *αριθμομαντεια*, a ſpecies of divination performed by means of numbers.

The gematrie, which makes the firſt ſpecies of the jewiſh cabbala, is a ſort of arithmomancy. See CABBALA.

ARK, ARC, or ARCH. See ARCH.

ARK, *arca*, in the ſcripture language, a kind of veſſel, built by the expreſs command of God, for preſerving Noah and his family, together with the ſeveral ſpecies of animals, from the univerſal deluge. It was not like our modern ſhips, but of an oblong ſquare form, not unlike a cheſt, only that the roof, or upper part, was built ſhelving, to carry off the rain. The ark has afforded ſeveral points of curious enquiry among the critics and naturaliſts, relating to the form, capacity, and materials; time of building, place of reſting after the flood, *&c.* Thoſe who deſire a particular diſcuſſion of theſe points may conſult Calmet's dictionary of the bible, Buteo de arca Noe, Wilkins's real character, *&c.*

ARK *of the covenant*, ſo the Jews called a ſmall cheſt, wherein were contained the golden

golden pot that had manna, Aaron's rod, and the tables of the covenant.

This coffer was of ſhittim wood, covered with plates or leaves of gold, being two cubits and a half in length, a cubit and an half wide, and a cubit and an half high. Upon the top of it there was all round a kind of gold crown, and two cherubims were faſtened to the cover. On the two ſides of this coffer there were four rings of gold, two on each ſide, thro' which ſtaves were put, by the help whereof they carried it as they marched thro' the wilderneſs.

ARKLOW, a ſea-port town of Ireland, ſituated in the county of Wicklow, about thirteen miles ſouth of the city of Wicklow, in 6° 20′ weſt longitude, and 52° 55′ north latitude.

ARLES, a city of Provence in France, ſituated on the eaſtern ſhore of the river Rhone, in 4° 45′ eaſt longitude, and 43° 32′ north latitude.

ARLON, a town of the duchy of Luxemburg, in the auſtrian Netherlands, ſituated in 5° 30′ eaſt longitude, and 49° 45′ north latitude.

ARM, *brachium*, a part of the human body, terminating at one end in the ſhoulder, and at the other in the hand.

Anatomiſts divide the arm into two parts, calling only that part the arm which is included between the ſhoulder and the elbow, the reſt, from the elbow to the wriſt, being taken into the greater hand, is called the fore arm. The arm, in this acceptation, has only one large bone, called the os humeri, or the ſhoulder bone. The other part conſiſts of two bones, viz. the radius, and cubitus, or ulna.

The os humeri has five ſorts of motions, which are effected by five pair of muſcles; upwards, by the deltoides, ſupraſpinatus, and coraco brachials; downwards, by the teres, rotundus major, and latiſſimus dorſi; forwards, by the pectoralis; backwards, by the infraſpinatus.

The muſcles of the other part are the biceps, brachiæus internus, gemellus, brachiæus externus, anconæus, pronator, radii teres, & quadratus, ſupinator longus, & brevis. Its motions are confined to two kinds, that of rotation, and that of flexion and extenſion.

For fractures and luxations of the arm, ſee HUMERUS and CUBITUS.

ARM, *in riding*, is applied to a horſe, when by preſſing down his head, he endeavours to defend himſelf againſt the bit, to prevent obeying, or being checked thereby.

A horſe is ſaid to arm himſelf with the lips, when he covers his bars with his lips, and deadens the preſſure of the bit.

ARM, in geography, denotes a branch of the ſea, or of a river.

ARM is alſo uſed figuratively for power.

ARM, in reſpect of the magnet. A loadſtone is ſaid to be armed, when it is incloſed, capped, or ſet in iron or ſteel, in order to increaſe its magnetic virtue. See the article MAGNET.

ARMADA, a ſpaniſh term, ſignifying a fleet of men of war, as armadilla does a ſquadron.

The armada which attempted to invade England, in the time of Queen Elizabeth, is famous in hiſtory.

ARMADILLO, in zoology, an animal of the quadruped claſs, comprehended by ſome among the hedge-hogs, but made a diſtinct genus by Linnæus, under the name daſypus; the diſtinguiſhing characteriſtic of which is, that the animals are covered with a kind of bony, or horny coat of mail, of various figures and dimenſions. One of theſe with feet ſomewhat reſembling the human hand, is repreſented in plate XX. fig. 6.

ARMAGH, once a conſiderable city of Ireland, but now much reduced, ſituated about thirty miles ſouth of Londonderry, in 6° 45′ weſt longitude, and 54° 30′ north latitude.

It is ſtill the ſee of the primate of Ireland, and gives name to the county of Armagh.

ARMAGNAC, a diſtrict or territory, in the north-eaſt part of Gaſcony in France.

ARMAN, in farriery. See the article DRENCH.

ARMED, in a general ſenſe, denotes ſomething provided with, or carrying arms.

ARMED, in the ſea language. A croſs-bar ſhot is ſaid to be armed, when ſome rope-yarn, or the like, is rolled about the end of the iron bar, which runneth through the ſhot.

A ſhip is ſaid to be armed, when fitted out, and provided, in all reſpects, for war.

ARMED, in heraldry, is uſed when the horns, feet, beak, or talons of any beaſt or bird of prey, are of a different colour from the reſt of their body. He bears a cock or a falcon armed, or, &c.

ARMED MAGNET, or LOADSTONE. See the article MAGNET.

ARMENIA, a large country of Aſia, comprehending Turcomania, and part of Perſia.

ARMENIAN, ſomething belonging to, or produced in, Armenia: thus, we ſay, *armenian bole*, *armenian ſtone*, &c. See the articles BOLES, LAPIS, &c.

AR-

BRITISH MUSEUM

Fig. 1. AQUILEGIA, or *COLUMBINE.*



Fig. 3. ARACARI.



Fig. 2. AQUIFOLIUM.



Fig. 4. ARBUTUS.

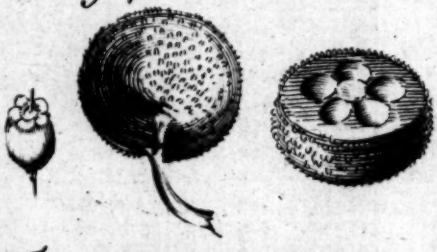


Fig. 5. ARCH.

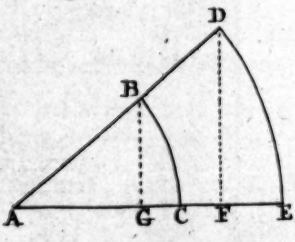


Fig. 7. ARGENT.

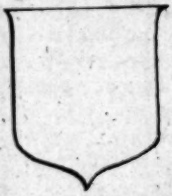


Fig. 6. ARMADILLO.



T. Jeffreys sculp.

ARMENIANS, in church-history, a sect or division amongst the eastern christians; thus called from Armenia, the country antiently inhabited by them; there are two kinds of armenians, the one catholic, and subject to the pope, having a patriarch in Persia, and another in Poland; the other makes a peculiar sect, having two patriarchs in Natolia. They are generally accused of being monophysites, only allowing of one nature in Jesus Christ. As to the eucharist, they, for the most part, agree with the greeks: they abstain rigorously from eating of blood, and meats strangled; and are much addicted to fasting.

ARMENTIERS, a fortified town in french Flanders, situated about seven miles west of Lisle, in 2° 50′ east longitude, and 50° 42′ north latitude.

ARMIERS, a town of Hainault, in the french Netherlands, situated on the river Sambre, about twenty miles south of Mons, in 3° 40′ east longitude, and 50° 15′ north latitude.

ARMIGER, an esquire, or armour-bearer.

ARMILLA-MEMBROSA, in anatomy, is that circular ligament which comprehends all the tendons belonging to the whole hand within a circle, in the region of the carpus.

ARMILLARY, *armillaris*, in a general sense, something consisting of rings, or circles, from *armilla*, a bracelet.

ARMILLARY SPHERE, an artificial sphere, composed of a number of circles, representing the several circles of the mundane sphere, put together in their natural order, to ease and assist the imagination, in conceiving the constitution of the heavens, and the motions of the celestial bodies.

The armillary sphere turns upon its axis P p (plate XXII. fig. 1.) within a silvered horizon H O, which is divided into degrees, and moveable every way, upon a brass supporter. E Q represents the equinoctial, and A B the zodiac, which is a broad circle divided into degrees, and into twelve equal parts, marked with the twelve signs ♈, ♉, ♊, &c. A P B p is the meridian, likewise divided into degrees.

The other parts are the two tropics, and two polar circles, both delineated in the figure.

ARMILUSTRIUM, in roman antiquity, a feast held among the Romans, in which they sacrificed armed, to the sound of trumpets.

ARMINGS, in the sea-language. See the article ARMED.

ARMINIANS, in church-history, a sect of christians, which arose in Holland, by a separation from the calvinists. They are great assertors of free-will. They speak very ambiguously of the prescience of God. They look on the doctrine of the trinity as a point not necessary to salvation; and many of them hold there is no precept in scripture, by which we are enjoined to adore the holy ghost; and that Jesus is not equal to God the father.

ARMIRO, a town of european Turky, in the province of Thessaly, situated in 23° 30′ east longitude.

ARMISTICE, a temporary truce, or cessation of arms for a very short space of time.

ARMOISIN, a silk stuff, or kind of taffety, manufactured in the East Indies, at Lyons in France, and Lucca in Italy. That of the Indies is slighter than those made in Europe.

ARMONIAC, or AMMONIAC, in natural history, a sort of volatile salt, of which there are two kinds, natural and artificial.

The natural sal ammoniac, used by the antients, was found in the sands of Lybia, near the temple of Jupiter Ammon. It was supposed to be generated in those sands from the urine of camels. The artificial, or common sal ammoniac, is chiefly brought from Egypt; and though there is hardly a more common drug, it is but very lately we have known in what manner it is made; being procured by sublimation from all sorts of urine of men and beasts, mixed with common salt and soot. It must be chosen white, clear, transparent, dry, and without filth; and when broken, it must appear as if full of needles.

The use of this salt is very considerable in medicine, and several artificers use it; such as dyers, silversmiths, pinmakers, farriers, &c. Its spirit is so sharp, that, when mixed with aqua-fortis, or spirit of nitre, it completes the dissolution of gold, which those two powerful dissolvents could not effect without it.

Its preparations are, 1. Flowers of sal armoniac. 2. Its volatile salt. 3. Its spirit. 4. Its dulcified spirit.

ARMOR, or ARMOUR. See ARMOUR.

ARMORIAL, somewhat relating to arms, or coats of arms. See the article ARMS.

ARMORY, a warehouse of arms, or a place

place wherein the military habiliments are kept, to be ready for uſe.

ARMORY is alſo a branch of the ſcience of heraldry, conſiſting in the knowledge of coats of arms, as to their blazons and various intendments. See the articles BLAZONING and HERALDRY.

ARMOUR denotes all ſuch habiliments as ſerve to defend the body from wounds, eſpecially of darts, a ſword, a lance, &c. A complete ſuit of armour formerly conſiſted of a helmet, a ſhield, a cuiraſſe, a coat of mail, a gantlet, &c. all now laid aſide.

ARMOURER, a perſon who makes or deals in arms and armour.

ARMS, *arma*, in general, all kinds of weapons, whether uſed for offence or defence.

Arms of offence are the ſword, piſtol, muſquet, bayonet, &c. See SWORD, &c.

Arms of defence. See ARMOUR.

ARMS, in a legal ſenſe, extend to any thing that a perſon wears for his own defence, or takes into his hand, and uſes, in anger, to ſtrike or throw at another.

ARMS of courteſy or parade, were lances not ſhod, ſwords without edge or point, &c. uſed in the antient tournaments. See the article TOURNAMENT.

Paſs of ARMS, a kind of combat, when antiently one or more cavaliers undertook to defend a paſs againſt all attacks.

ARMS denote alſo the natural weapons of beaſts, as claws, teeth, beak, &c.

ARMS, or ARMORIES, in heraldry, marks of honour borne upon ſhields, banners, and coats, in order to diſtinguiſh ſtates, families, and perſons.

At this time, arms follow the nature of titles, which being made hereditary, they are alſo become ſo, being the ſeveral marks to diſtinguiſh families, as names ſerve to diſtinguiſh individuals. They are the gift of kings and princes, through the miniſtry of their kings and heralds of arms, who ought to be knowing and judicious, to give the proper arms to all perſons.

Arms are ſaid to be parted, couped, quartered, &c.

Charged ARMS, are ſuch as retain their antient integrity and value, with the addition of ſome new honourable bearing.

Canting or vocal ARMS, thoſe in which there are ſome figures, alluding to the name of the family.

Full or intire ARMS, ſuch as retain their primitive purity, without any alterations or abatements.

Falſe ARMS, ſuch as are not conformable to the rules of heraldry.

ARMS, in falconry, the legs of a hawk from the thigh to the foot.

Place of ARMS, in fortification. See the article PLACE.

Aſſumptive ARMS. See ASSUMPTIVE.

ARMS *of patronage*. See PATRONAGE.

King at ARMS. See KING *at arms*.

Herald at ARMS. See the article HERALD.

Purſuivant at ARMS. See PURSUIVANT.

College of ARMS. See COLLEGE *of heralds*.

ARMUYDEN, a ſea port town of the iſland of Zetland, ſituated at the mouth of the canal of Middleburg, in 3° 35′ eaſt lon. and 51° 30′ north latitude.

ARMY, a large body of ſoldiers, conſiſting of horſe and foot, completely armed, and provided with artillery, ammunition, proviſions, &c. under the command of one general, having lieutenant-generals, major-generals, brigadiers, and other officers under him. An army is compoſed of ſquadrons and battalions, and is uſually divided into three corps, and formed into three lines; the firſt line is called the van-guard, the ſecond the main body, and the third the rear-guard, or body of reſerve. The middle of each line is poſſeſſed by the foot, the cavalry form the right and left wing of each line; and ſometimes they place ſquadrons of horſe in the intervals between the battalions. When the army is drawn up in order of battle, the horſe are placed at five feet diſtance from each other, and the foot at three. In each line the battalions are diſtant from each other one hundred and eighty feet, which is nearly equal to the extent of their front; and the ſame holds of the ſquadrons, which are about three hundred feet diſtant, the extent of their own front. Theſe intervals are left for the ſquadrons and battalions of the ſecond line to range themſelves againſt the intervals of the firſt, that both may more readily march through thoſe ſpaces to the enemy: the firſt line is uſually three hundred feet diſtant from the ſecond, and the ſecond from the third, that there may be ſufficient room to rally, when the ſquadrons and battalions are broken.

This is to be underſtood of a land army only. A naval, or ſea army, is a number of ſhips of war, equipped and manned with ſailors and mariners, under the command of an admiral, with other inferior officers under him. See the articles NAVY, FLEET, &c.

For

For diſeaſes incident to armies, ſee the articles CAMP, HOSPITAL, &c.

ARNAY-LE-DUC, a town of Burgundy in France, ſituated on the river Arroux, in 4° eaſt longitude, and 47° north lat.

ARNHEIM, a large city of Guelderland, in the united Netherlands, ſituated on the river Lech, about ten miles north of Nimeguen, in 5° 50′ eaſt longitude, and 52° north latitude.

ARNICA, in botany, a genus of the ſyngeneſia polygamia ſuperflua claſs of plants, the common calyx of which is an imbricated perianthium, ſhorter than the radius of the corolla, with lanceolated, erect petals, of the length of the cup: the compound flower is radiated, the hermaphrodite corollulæ in the diſk are very numerous, and the female ones in the radius are about twenty in number: the proper hermaphrodite flower is monopetalous, tubulous, erect, and trifid: there is no pericarpium, the ſeed is ſingle, oblong, and crowned with a capillary long down.

ARNO, a river of Italy, which, after watering Tuſcany, falls into the Mediterranean, below Piſa.

ARNOLDISTS, in church-hiſtory, ſectaries ſo called from their leader Arnold of Breſſe, who was a great declaimer againſt the wealth and vices of the clergy; and who is alſo charged with preaching againſt baptiſm, and the euchariſt.

AROMATIC, an appellation given to ſuch plants and other bodies as yield a briſk fragrant ſmell, and a warm ſpicy taſte, as cloves, cardamom-ſeeds, cinnamon, nutmegs, &c. Their peculiar qualities reſide in a volatile oil, uſually called eſſential oil, and a groſſer reſinous ſubſtance, capable of being extracted by ſpirit of wine. The virtues of all aromatic vegetables are extracted by vinous ſpirits; very imperfectly by watery liquors. In diſtillation they ariſe with water more perfectly than with ſpirit. Aromatics, conſidered as medicines, warm the ſtomach, and by degrees the whole habit, raiſe the pulſe, and quicken the circulation: hence in cold languid caſes, they increaſe ſtrength, and promote the natural ſecretions.

It is remarkable, that aromatics or ſpices preſerve animal ſubſtances from putrefaction; and that providence has taken care to furniſh warm climates with plenty of aromatics, which the inhabitants make frequent uſe of, and probably thereby check that ſpontaneous tendency to putrefaction, to which the heat inclines them.

Beſides all kind of ſpices, not a few of the nervous ſimples may be ranked among aromatics.

AROMATIC *wine*, that in which aromatics have been infuſed.

ARONA, a fortified town of the Milaneſe, ſituated on the ſouth-weſt part of the lake Maggior, in 8° 50′ eaſt longitude, and 45° 40′ north latitude.

ARONCHES, a town of the province of Alentejo, in Portugal, ſituated in 7° 30′ weſt longitude, and 39° north latitude.

AROURA, a grecian meaſure of fifty feet. It was more frequently uſed for a ſquare meaſure of half the plethron. The egyptian aroura was the ſquare of one hundred cubits.

ARRACHE'E, in heraldry, a term applied to the repreſentations of plants torn up by the roots.

ARRACK. See the article RACK.

ARRAIGNMENT, in law, the arraigning or ſetting a thing in order, as a perſon is ſaid to arraign a writ of novel diſſeiſin, who prepares and fits it for trial. It is moſt properly uſed, to call a perſon to anſwer in form of law upon an indictment, &c. at the ſuit of the king.

The arraignment is to take care that the priſoner appears to be tried, and hold up his hand at the bar for the certainty of the perſon, and plead a ſufficient plea to the indictment. The priſoner is to hold up his hand only in treaſon and felony; but this is only a ceremony: if he owns that he is the perſon, it is ſufficient without it; and then, upon his arraignment, his fetters are to be taken off.

ARRAN, an iſland of Scotland, ſituated in the frith of Clyde, between Cantire and Cunningham.

ARRAS, a large fortified town of the french Netherlands, capital of the province of Artois, ſituated in 2° 50′ eaſt longitude, and 50° 20′ north latitude.

It is from this city that the tapeſtry, called *arras hangings*, takes its denomination.

ARRAS, or ARAXES, is alſo the name of a river of Georgia, which diſcharges itſelf into the Caſpian ſea.

ARRAY, in law, the ranking or ſetting forth of a jury, or inqueſt of men impanelled on a cauſe.

Battle-ARRAY, the order or diſpoſition of an army, drawn up with a view to engage the enemy. See the article ARMY.

ARREARS, the remainder of a ſum due, or money remaining in the hands of, an accountant. It ſignifies alſo, more generally, the money that is due for rent, unpaid for land or houſes; likewiſe what remains unpaid of penſions, taxes, or any other money payable annually, or at any fixed term.

Rien ARREAR, in law, a plea whereby a perſon, ſued for arrears, alledges there are none due.

ARRENTATION, in the foreſt-law, is the licenſing an owner of lands in a foreſt, to incloſe them with a low hedge, and a ſmall ditch, in conſideration of a yearly rent.

ARREST, the apprehending and reſtraining a perſon, in order to oblige him to be obedient to the law; which in all caſes, except treaſon, felony, or breach of the peace, muſt be done by virtue of a precept out of ſome court. Doors may be broke open to arreſt a felon; but in civil caſes it is otherwiſe, unleſs it be in purſuit of one before taken.

Attornies, *&c.* malicioufly cauſing any perſon to be arreſted, ſhall forfeit ten pounds, and treble damages. The ſame penalty is incurred for arreſting a perſon, (except in criminal caſes, and an eſcape-warrant) on ſundays; but arreſts made in the night, are equally lawful with thoſe by day.

Peers of the realm, and members of parliament, may not be arreſted for debt; nor can any other ſubject be arreſted for leſs than ten pounds, on a proceſs iſſued out of a ſuperior court, or forty ſhillings in an inferior one.

ARREST *of judgment*, the aſſigning juſt reaſons why judgment ſhould not paſs, as want of notice of the trial, a material defect in the pleading, when the record differs from the deed pleaded, when perſons are mis-named, where more is given by the verdict than is laid in the declaration, *&c.* This may be done either in criminal or civil caſes.

ARRESTANDIS BONIS, *&c.* a writ that lies for one whoſe cattle or goods are taken by another, who is likely to carry them away before the conteſt is decided.

ARRESTO FACTO SUPER BONIS, *&c.* a writ brought by a denizen againſt the goods of aliens found within this kingdom, as a recompence for goods taken from him in a foreign country.

ARRESTS, in farriery, mangy tumours upon a horſe's hinder legs, between the ham and the paſtern. See RAT-TAIL.

ARRHABONARII, a ſect of chriſtians, who held that the euchariſt is neither the real fleſh or blood of Chriſt, nor yet the ſign of them: but only the pledge or earneſt thereof.

ARRHEPHORIA, ἀρρηφορία, a feaſt among the Athenians, inſtituted in honour of Minerva, and Herſe daughter of Cecrops.

ARRIERE, the hinder or poſterior part of any thing. See the article REAR.

ARRIERE-BAN, in the French cuſtoms, is a general proclamation, whereby the king ſummons to the war all that hold of him; both his vaſſals, *i. e.* the nobleſſe, and the vaſſals of his vaſſals.

ARRIERE-FEE, or FIEF, is a fee dependent on ſome other ſuperior one.

ARRIERE-VASSAL, or TENANT, the vaſſal or tenant of another vaſſal or tenant.

ARROBA, a weight uſed in Spain, in Portugal, at Goa, and throughout all ſpaniſh America. In all theſe places, the arrobas are ſcarce any otherwiſe like each other but in name, being very different in weight, and in their proportion to the weights of other countries.

ARROE, an iſland of Denmark, ſituated in the Baltic ſea, in 10° 15′ eaſt longitude, and 55° 15′ north latitude.

ARROGATION, or ADROGATION. See the article ADROGATION.

ARRONDE'E, in heraldry, a croſs, the arms of which are compoſed of ſections of a circle, not oppoſite to each other, ſo as to make the arms bulge out thicker in one part than another; but the ſections of each arm lying the ſame way, ſo that the arm is every where of an equal thickneſs, and all of them terminating at the edge of the eſcutcheon like the plain croſs.

ARROW, a miſſive weapon, ſharp-pointed and barbed, deſigned to be ſhot or thrown out of a bow. See BOW.

ARROW, in ſurveying, ſmall ſticks, ſhod with iron, to ſtick into the ground at the end of the chain.

ARROW, *ſagitta*, in aſtronomy. See the article SAGITTA.

ARSENIC, a poiſonous mineral-preparation, which is either white, red, or yellow, all prepared from the flowers of cobalt. See the article COBALT.

The white arſenic, which is prepared by ſubliming theſe flowers, without any addition, is the baſis of the other two; the yellow arſenic being made by ſubliming ten pounds of the white kind to which one pound of ſulphur has been added; and

and red arſenic is ſublimed from ten pounds of white arſenic, or flowers of cobalt, one pound of ſulphur, and ſix ounces of ſcoriæ of copper.

Properties and uſes of ARSENIC. The ſmalleſt quantity of any of theſe arſenics, mixed with any metal, renders it friable, and abſolutely deſtroys its malleability; ſo that the refiners dread nothing ſo much as arſenic in their metals. It preys moſt readily on iron, then on copper; both which it turns white. Silver, and even gold, are not able to withſtand the corroſive power of arſenic; but tin ſuffers moſt of all from it, being thereby calcined in an inſtant to grey looſe aſhes. It is uſed in many manufactures. Potters, glaſs-men, painters in enamel, &c. find it of uſe in their ſeveral profeſſions.

Arſenic, taken internally, is the moſt fatal of all poiſons, and therefore people cannot be too cautious in this reſpect. Hence alſo appears the extreme danger in ſelling yellow arſenic inſtead of orpiment, which is but too frequently done.

ARSENICAL, in a general ſenſe, ſomething belonging to, or partaking of the nature of arſenic.

ARSENICAL MAGNET, a preparation of white arſenic with antimony and ſulphur, ſaid to be a gentle cauſtic.

ARSENOTHELYS, ἀρσενοθήλυς, the ſame with hermaphrodite.

ARSIS and THESIS, in muſic. A point is ſaid to move *per arſin* and *theſin*, which riſes in one part and falls in another, and *vice verſa*.

ARSON, in law, the ſame with houſe-burning, which is felony at common law, and likewiſe by ſtatute.

ART, *ars*, a ſyſtem of rules, ſerving to facilitate the performance of certain actions; in which ſenſe it ſtands oppoſed to ſcience, or a ſyſtem of merely ſpeculative principles.

Arts are commonly divided into liberal and mechanical; the former comprehending poetry, painting, ſculpture, architecture, &c. and the latter, the whole body of mechanical trades, as carpentry, maſonry, turnery, &c. See the articles POETRY, PAINTING, &c.

The great Bacon obſerves, that the arts which relate to the eye and ear, are accounted moſt liberal: the others being held in leſs repute, as approaching nearer to ſenſuality than magnificence: alſo, that during the riſe of ſtates, the military arts have been found to flouriſh; when at their heights, the liberal arts; and, when on the decline, the arts of luxury.

ART is alſo an appellation given to ſeveral ſuperſtitious practices, as St. Anſelm's art, St. Paul's art, &c.

Terms of ART. See the article TERM.

Batchelor of ARTS. See BATCHELOR.

Maſter of ARTS. See the article MASTER.

ART and PART, in the law of Scotland, is applied to an accomplice. See the article ACCOMPLICE.

The facts inferring art and part need not be particularly laid in the libel or indictment, for theſe general words, as terms of ſtated ſignification, are ſufficient. Yet theſe facts may be ſet forth, and it is proper ſo to do, if the proſecutor chuſes to confide in the court rather than in the jury.

Alſo in the criminal letters, the perſons of the accomplices muſt be deſcribed by proper names and deſignations.

One may be art and part, 1° By giving counſel to perpetrate, without diſtinction, whether the crime would have been committed without ſuch counſel or not. This being what can never be perfectly known. But it is to be obſerved, that in the more atrocious crimes, he that gives counſel is equally puniſhed as him that commits them; but in the leſs atrocious leſs ſeverely. And ſometimes reaſons of mitigation are taken from the age, the manner of adviſing, &c. 2° By aid and aſſiſtance, and that either previous, or concomitant, or ſubſequent, to the commiſſion of the crime. The firſt rarely comes up to art and part, unleſs very particularly qualified; the ſecond commonly does, and it is eaſily known, if it does not; the third never, and hardly deſerves the name, unleſs it be in providing for the criminal's eſcape. But any of the three make art and part, if the perpetration was premeditated. 3° By a clear and explicit mandate to commit the crime, or to do ſomewhat unlawful in itſelf, which with great probability might produce it, if executed by the hand of the mandatory, and not that of another.

ARTA, or LARTA, a ſea port town of Epirus, in european Turky, ſituated in 22° eaſt longitude, and 39° north lat.

ARTEDIA, a genus of the pentandria digynia claſs of plants, the general umbel of which is multiple, plane and patent; the partial umbel is ſmall, but ſimilar; the general involucrum is compoſed of about ten leaves; they are of an oblong oval figure, nearly of the length of the umbel, and have three ſpines or ſetæ at

their extremities: the partial involucrum is compoſed of two or three leaves, and turns outward: the general corolla is difform, and radiated; the ſingle flowers of the diſk are all males; they conſiſt each of five erect inflexo-cordate petals: the ſingle flowers of the radius are all hermaphrodites; they conſiſt of the ſame number of petals, but in theſe the exterior one is larger than the reſt, and is divided into two parts: the fruit is roundiſh, compreſſed, and diviſible into two parts: the ſeeds are two, oblong and elegantly ridged at the edges, with round ſquammæ.

ARTEMISIA, in botany, a genus of plants with floſculous flowers, comprehending not only the mugworts, but wormwood and ſouthernwood; which all belong to the *ſyngeneſia polygamia ſuperfluа* claſs of Linnæus. See the articles MUGWORT, WORMWOOD, &c.

Artemiſia, however, moſt commonly denotes mugwort. See plate XXII. fig. 2.

ARTERIA, *artery*. See ARTERY.

ARTERIAL, or ARTERIOSE, in anatomy, any thing relating to the arteries.

ARTERIOSE VEIN, a name given to the pulmonary artery.

ARTERIOSE CANAL, a tube in the heart of a fœtus, that, with the foramen ovale, is of uſe to preſerve the circulation of the blood, &c.

ARTERIOTOMY, the opening an artery, with deſign to procure an evacuation of blood.

This operation is uſed only in extraordinary caſes, as it is very dangerous, and muſt be practiſed in the temples, the forehead, or behind the ears, where the arteries are eaſily cloſed again.

This operation is now ſeldom performed on any but the temporal arteries, which may be opened very eaſily by the lancet as they lie cloſe under the ſkin, and lying cloſe upon the os frontis, they may be readily compreſſed againſt it, and there is no danger of a profuſe hæmorrhage, or aneuriſm; but even in this moſt convenient part, it muſt be acknowledged that the opening an artery is much more difficult than the opening a vein, as the veſſel ſeldom appears plainly through the ſkin, and there is no guide but its vibration under the finger.

In the operation of arteriotomy, the patient muſt be placed in a good light, and the ſurgeon muſt place two fingers of his left-hand, at a ſmall diſtance from each other both on the artery. He muſt then obſerve the courſe of the veſſel, and cut down into it deeper than in phlebotomy, and raiſe the point of the lancet, ſo as to make a ſufficient orifice: in this he need not fear the cutting of the veſſel quite through, for even that is attended with no ill conſequences after deligation. If now the blood follows the lancet in a very florid and ſalient ſtream, you may be ſatisfied the artery is well opened; if this is not the caſe it muſt be cut again; but as in this operation, the fine point of a lancet is liable to be broke againſt the bone, the uſe of a ſmall ſcalpel is preferable. A pound or a pound and half of blood ſhould be taken by this operation: when the ſufficient quantity of blood is taken, the deligation muſt be made with three compreſſes, each larger than the other, laying on the ſmalleſt firſt, in which muſt be included a farthing, a bit of lead, or of chewed paper to compreſs the artery againſt the bone, and the head muſt continue tied up with a proper bandage eight days.

ARTERY, in anatomy, a conical tube or canal, which conveys the blood from the heart to all parts of the body.

An artery is compoſed of three membranes, or coats; the outermoſt of which appears to be a web of fine blood-veſſels and nerves, for nouriſhing the interior membranes. The next is compoſed of circular or ſpiral fibres, of which there are more or fewer, according to the bigneſs of the artery. Theſe fibres being very elaſtic, contract themſelves with ſome force, when the power ceaſes, by which they have been ſtretched out. The third and innermoſt membrane is of a denſe contexture, yet tranſparent and fine. It ſerves to keep the blood within its channels, which otherwiſe would, upon the dilatation of the artery, ſeparate, with much eaſe, the ſpiral fibres from one another. The pulſe of the arteries conſiſts of two reciprocal motions, like the pulſe of the heart, being a ſyſtole and a diaſtole, keeping oppoſite times, the ſyſtole of the one anſwering to the diaſtole of the other.

The arteries of the human body are, ſtrictly ſpeaking, only two, *viz.* the pulmonary artery, and the aorta. See the articles PULMONARY and AORTA.

All the other arteries of the body, tho' diſtinguiſhed by particular names, are only branches of theſe two. The aſcending aorta, ariſing from the left ventricle of the heart, preſently gives two arteries, called

BRITISH MUSEUM

Fig. 1. ARTERIES of the *HUMAN BODY*.

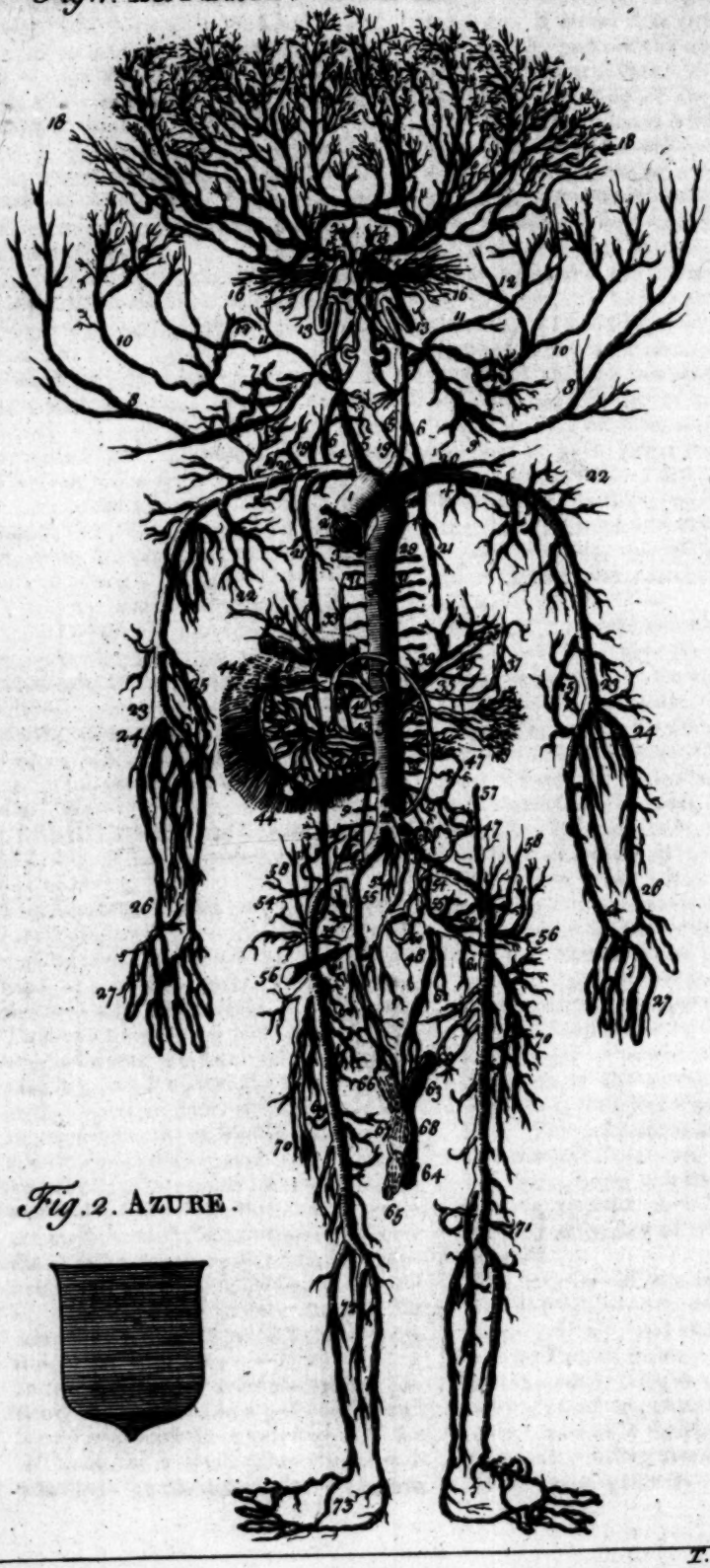


Fig. 2. AZURE.

T. Jefferys sculp.

called coronary ones, to the heart itſelf. A little above this, it is divided into three aſcending branches: from which are formed the two carotids, and the two ſubclavians; and from theſe laſt proceed the muſculares colli, the external ſcapular artery, the ſuperior intercoſtals, the mediaſtinal artery, the ſuperior diaphragmatic artery, the mammary artery, and the axillary arteries: all which are ſubdivided into leſs branches, as will be ſhewn under the articles CAROTID, SCAPULAR, AXILLARY, &c.

From the deſcending trunk of the aorta proceed, in the following order, the bronchial artery, the inferior intercoſtals, the arteries of the œſophagus, the inferior diaphragmatics, the cœliac, ſuperior meſenteric, the renal or emulgent arteries, the ſpermatics, the inferior meſenteric, the lumbar arteries, the ſacra, and two iliacs. Theſe are the main branches ſent out from the deſcending aorta, each of which is again ſubdivided into many leſſer branches. See the articles BRONCHIAL, COELIAC, &c.

To enter into a more minute detail of theſe leſſer ſubdiviſions, would be tedious; and, therefore, we think it more expedient to refer to plate XXI. fig. 1. where the arteries are not only delineated, but their ſeveral names explained by proper references, in the following manner.

EXPLANATION of plate XXI. fig. 1.

1. Aorta, cut from its origin at the left ventricle of the heart.
2, 2. Trunks of the coronal arteries.
3. The three ſemilunar valves.
4, 4. Subclavian arteries.
5, 5. Carotid arteries.
6, 6. Vertebral arteries.
7, 7. Arteries of the tongue, &c.
8, 8. Temporal arteries.
9, 9. Point out the neighbouring muſcles of the temporal arteries, the hairy ſcalp, and forehead.
10, 10. Trunks which ſend blood to the foramina narium.
11, 11. Occipital arteries.
12, 12. Arteries which carry blood to the fauces, gargareon, and muſcles of thoſe parts.
13, 13. Contortions of the carotids.
14, 14. Thoſe parts of the carotids, where they paſs by each ſide of the ſella turcica, where divers ſmall branches ariſe from them, to compoſe the rete mirabile.
15, 15. Ophthalmic arteries.
16, 16. Arteries of the cerebellum.
17, 17. The communicant branches between the carotid and cervical artery.
18, 18. Ramifications of the arteries within the ſkull.
19, 19. Arteries of the larynx.
20, 20. Other arteries of the larynx, which convey the blood to the muſcles of the neck and ſcapula.
21, 21. Mammary arteries.
22, 22. The arteries of the muſcles of the os humeri, and ſome of thoſe of the ſcapula.
23, 24, 25, 26. Arteries of the arm.
27. Arteries of the hand and fingers.
28, 28. Deſcending trunk of the aorta.
29. Bronchial artery.
30. A ſmall artery ſpringing from the fore-part of the aorta deſcendens, paſſing to the gula.
31, 31. Intercoſtal arteries.
32. Trunk of the cœliac artery.
33, 33, 33. Hepatic arteries.
34. Arteria Cyſtica.
35, 36, 37, 38, 39. Arteries of the ſtomach, pylorus, and epiploïs.
40, 40. Phrenic arteries.
41. Trunk of the ſplenic artery.
42. Two ſmall arteries going to the upper part of the duodenum and pancreas.
43, 44, 45, 46, 47. Meſenteric arteries.
48. Thoſe of the rectum.
49, 49. Emulgent arteries.
50. The vertebral arteries of the loins.
51, 51. Spermatic arteries.
52. Arteria ſacra.
53, 53. Iliac arteries.
54, 54, 58, 58. Iliaci externi.
55, 55, 59, 59. Iliaci interni.
56, 56. Umbilical arteries.
57, 57. Epigaſtric arteries.
60, 62. Arteries of the penis and pudendum.
61, 61. Arteries of the bladder.
63. The penis diſtended with wind, and dried.
64. The glans penis.
65. The upper-part of the dorſum penis, cut from the body of the penis, and raiſed to the corpora cavernoſa penis.
66, 66. Corpora cavernoſa penis freed from the oſſa pubis, and tied after inflation.
67. The two arteries of the penis, as they appear injected with wax in each cavernous body of the penis.
68. The capſula and ſeptum of the corpora cavernoſa penis.
69, 69, 70, 70. Crural arteries.
71. That part of the crural artery that paſſes the ham.

72.

Fig. 1. ARTERIES of the *HUMAN BODY*.

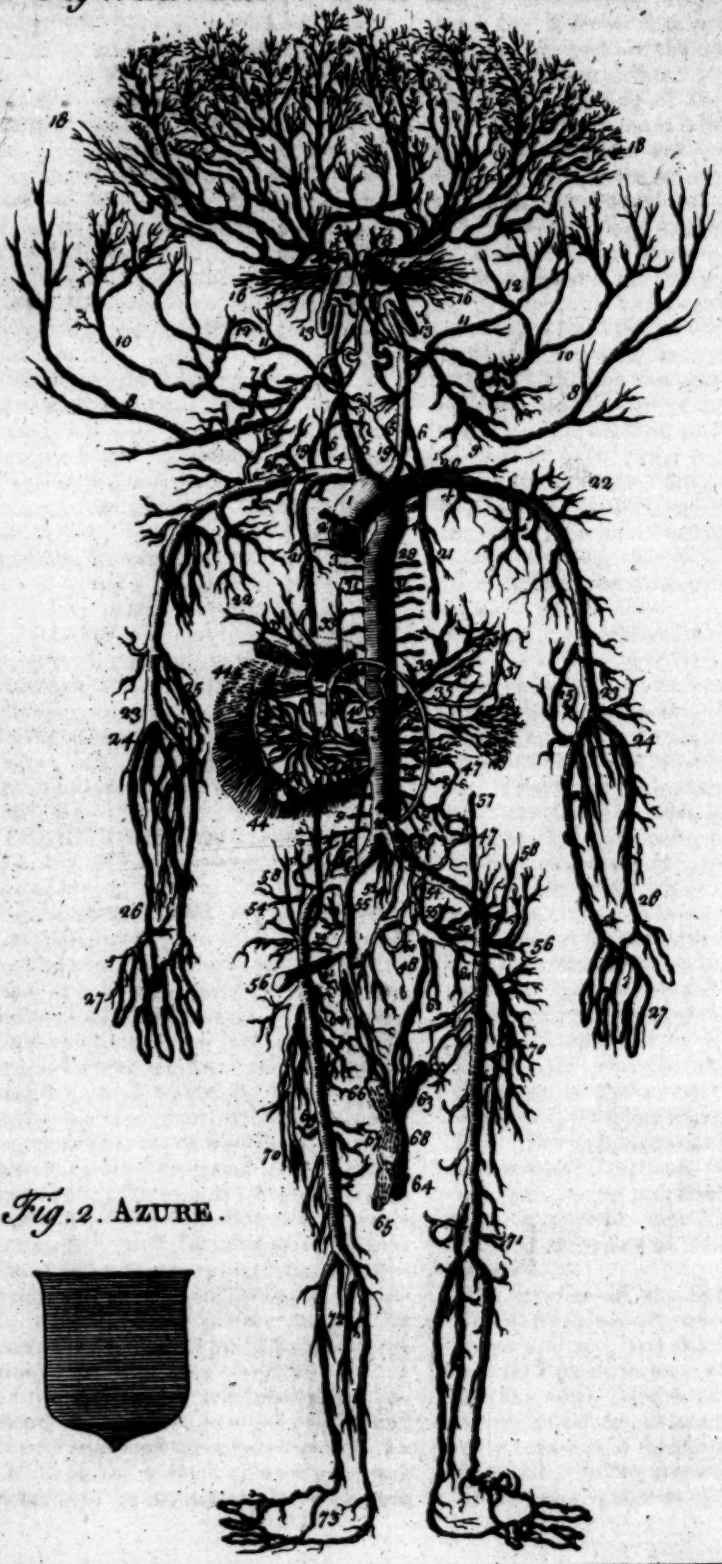


Fig. 2. AZURE.

T. Jefferys sculp.

called coronary ones, to the heart itſelf. A little above this, it is divided into three aſcending branches: from which are formed the two carotids, and the two ſubclavians; and from theſe laſt proceed the muſculares colli, the external ſcapular artery, the ſuperior intercoſtals, the mediaſtinal artery, the ſuperior diaphragmatic artery, the mammary artery, and the axillary arteries: all which are ſubdivided into leſs branches, as will be ſhewn under the articles CAROTID, SCAPULAR, AXILLARY, &c.

From the deſcending trunk of the aorta proceed, in the following order, the bronchial artery, the inferior intercoſtals, the arteries of the œſophagus, the inferior diaphragmatics, the cœliac, ſuperior meſenteric, the renal or emulgent arteries, the ſpermatics, the inferior meſenteric, the lumbar arteries, the ſacra, and two iliacs. Theſe are the main branches ſent out from the deſcending aorta, each of which is again ſubdivided into many leſſer branches. See the articles BRONCHIAL, COELIAC, &c.

To enter into a more minute detail of theſe leſſer ſubdiviſions, would be tedious; and, therefore, we think it more expedient to refer to plate XXI. fig. 1. where the arteries are not only delineated, but their ſeveral names explained by proper references, in the following manner.

EXPLANATION of plate XXI. fig. 1.

1. Aorta, cut from its origin at the left ventricle of the heart.
2, 2. Trunks of the coronal arteries.
3. The three ſemilunar valves.
4, 4. Subclavian arteries.
5, 5. Carotid arteries.
6, 6. Vertebral arteries.
7, 7. Arteries of the tongue, &c.
8, 8. Temporal arteries.
9, 9. Point out the neighbouring muſcles of the temporal arteries, the hairy ſcalp, and forehead.
10, 10. Trunks which ſend blood to the foramina narium.
11, 11. Occipital arteries.
12, 12. Arteries which carry blood to the fauces, gargareon, and muſcles of thoſe parts.
13, 13. Contortions of the carotids.
14, 14. Thoſe parts of the carotids, where they paſs by each ſide of the ſella turcica, where divers ſmall branches ariſe from them, to compoſe the rete mirabile.
15, 15. Ophthalmic arteries.
16, 16. Arteries of the cerebellum.
17, 17. The communicant branches between the carotid and cervical artery.
18, 18. Ramifications of the arteries within the ſkull.
19, 19. Arteries of the larynx.
20, 20. Other arteries of the larynx, which convey the blood to the muſcles of the neck and ſcapula.
21, 21. Mammary arteries.
22, 22. The arteries of the muſcles of the os humeri, and ſome of thoſe of the ſcapula.
23, 24, 25, 26. Arteries of the arm.
27. Arteries of the hand and fingers.
28, 28. Deſcending trunk of the aorta.
29. Bronchial artery.
30. A ſmall artery ſpringing from the fore-part of the aorta deſcendens, paſſing to the gula.
31, 31. Intercoſtal arteries.
32. Trunk of the cœliac artery.
33, 33, 33. Hepatic arteries.
34. Arteria Cyſtica.
35, 36, 37, 38, 39. Arteries of the ſtomach, pylorus, and epiploïs.
40, 40. Phrenic arteries.
41. Trunk of the ſplenic artery.
42. Two ſmall arteries going to the upper part of the duodenum and pancreas.
43, 44, 45, 46, 47. Meſenteric arteries.
48. Thoſe of the rectum.
49, 49. Emulgent arteries.
50. The vertebral arteries of the loins.
51, 51. Spermatic arteries.
52. Arteria ſacra.
53, 53. Iliac arteries.
54, 54, 58, 58. Iliaci externi.
55, 55, 59, 59. Iliaci interni.
56, 56. Umbilical arteries.
57, 57. Epigaſtric arteries.
60, 62. Arteries of the penis and pudendum.
61, 61. Arteries of the bladder.
63. The penis diſtended with wind, and dried.
64. The glans penis.
65. The upper-part of the dorſum penis, cut from the body of the penis, and raiſed to the corpora cavernoſa penis.
66, 66. Corpora cavernoſa penis freed from the oſſa pubis, and tied after inflation.
67. The two arteries of the penis, as they appear injected with wax in each cavernous body of the penis.
68. The capſula and ſeptum of the corpora cavernoſa penis.
69, 69, 70, 70. Crural arteries.
71. That part of the crural artery that paſſes the ham.

72. Arteries of the leg.
73. Arteries of the foot.

Wounds of the ARTERIES. When any conſiderable artery is wounded or divided, there generally enſues ſo violent an hæmorrhage, that the wounded party is in an inſtant ſenſible of a great weakneſs and a loſs of ſpirits, and faints away; and when any of the larger arteries are divided, whether they are external or internal, he dies upon the ſpot. Although ſomewhat leſs danger is apprehended from wounds that are inflicted upon the arteries, which are ſituated upon the external parts of the body, ſome few excepted, becauſe they will admit of the ligature, and other means for reſtraining the violence of the hæmorrhage; nevertheleſs, in the opinion of Heiſter, it is impoſſible to prevent the limbs, which lie below the diviſion of the artery, and are uſed to receive their nouriſhment by that channel, from becoming paralytic; nay, ſometimes from mortifying: this is almoſt conſtantly the caſe, when the trunk of the brachial or crural artery is divided. See WOUND and HÆMORRHAGE.

Theſe being the conſequences which follow the total diviſion of a conſiderable artery, it now remains to conſider what will follow a partial diviſion of them. Whenever a large artery is wounded, and not entirely divided, the wounded fibres inſtantly contract themſelves; by this means they dilate the orifice of the wound, and render it difficult to ſtop the flux of the blood; and though the hæmorrhage be ſtopped for a little time, yet it will burſt out again on a ſudden violently, or, at leaſt, produce an aneuriſm: this will frequently be the caſe, when only the external coat of the artery is wounded; for by this means, the internal coat is left to ſuſtain the whole impetus of the pulſe, which it being unequal to, is forced by degrees into a tumour like a bag, which frequently brings on great miſchiefs. See the articles TUMOUR and ANEURISM.

The various methods for ſtopping the profuſion of blood, attending injuries of the arteries, have been already treated of under the article hæmorrhage; but it may be here obſerved, that in dangerous wounds of the large arteries, ſuch as the crural and axillary, and in amputations of the limbs, the ſafeſt method is that of making a ligature round the veſſels: if this is performed by paſſing a ſtrong waxed thread under the artery, by the help of a crooked needle, the blood is preſently ſtopped, and the orifices of the artery coaleſce.

Rough ARTERY, *aſpera arteria*, the cartilaginous tube, deſcending from the mouth to the lungs, and otherwiſe called the trachea, or wind pipe. See TRACHEA.

ARTHRITIS, the GOUT, in medicine. See the article GOUT.

ARTHRITICA, in botany, a name uſed for the primroſe.

ARTHRODIA, in natural hiſtory, a genus of imperfect cryſtals, found always in complex maſſes, and forming long, ſingle pyramids, with very ſhort and ſlender columns. See the article CRYSTAL.

ARTHRODIA, in anatomy, a ſpecies of articulation, wherein a flat head of one bone is received into a ſhallow ſocket of another.

ARTHRONIA, in zoology, a name given by Dr. Hill to that claſs of animalcules, which have viſible limbs; ſuch as the ſcelaſius, brachionus or wheel-animals, &c. See the article SCELASIUS, &c.

ARTICHOAK, CYNARA, in botany. See the article CYNARA.

ARTICLE, a clauſe or condition of a contract, treaty, &c.

ARTICLE is alſo a ſmall part or diviſion of a diſcourſe, a book, or writing, &c.

ARTICLE *of faith* is a point of religious doctrine, allowed and received by any church, or religious ſect, as having been revealed from heaven.

ARTICLE, in anatomy, the juncture of two bones deſigned for motion.

ARTICLE *of death*, the laſt pang or agony of one juſt expiring.

ARTICLE, in arithmetic, ſometimes called decad, denotes a number juſtly diviſible into ten parts, as the numbers 10, 20, 30, &c.

ARTICLE, in grammar, a particle in moſt languages, that ſerves to expreſs the ſeveral caſes and genders of nouns, when the languages have not different terminations to denote the different ſtates and circumſtances of nouns.

The latin has no article; but the greeks have their ὁ: the eaſtern languages have their *he emphaticum*; and moſt of the modern languages have had recourſe to articles. The only articles made uſe of in the engliſh tongue, are *a* and *the*; which, prefixed to ſubſtantives, determine their general ſignification to ſome particular thing. The uſe of *a* is in a general ſenſe, and may be applied to any particular perſon or thing, and upon that account

account is called an *indefinite article*: but *the*, being a determinate article, is called definite, or demonſtrative, as applying the word to one individual. The French have three articles, *le*, *la*, and *les*; the Italians have their *il*, *lo*, and *la*; and the Germans their *der*, *das*, and *dat*.

ARTICULARIS MORBUS, the ſame with the gout. See the article GOUT.

ARTICULATE SOUNDS are ſuch ſounds as expreſs the letters, ſyllables, or words of any alphabet or language: ſuch are formed by the human voice, and by ſome few birds, as parrots, *&c.* Other brutes cannot articulate the ſounds of their voice.

ARTICULATED, ſomething furniſhed with, or conſiſting of joints.

ARTICULATION, in anatomy, denotes the juncture of two bones, intended for motion.

Articulation is of two kinds; the firſt is called diarthroſis, being that which has a manifeſt motion. That which only admits of an obſcure motion, is called ſynarthroſis.

The former is ſubdivided into enarthroſis, arthrodia, and ginglymus. See the article ENARTHROSIS, *&c.*

The latter is ſubdivided into ſymphyſis, ſyntenoſis, ſutura, harmonia, ſyſſarcoſis, ſynchondroſis, and ſynneuroſis. See the articles SYMPHYSIS, *&c.*

ARTIFICER, a perſon whoſe employment it is to manufacture any kind of commodity, as in iron, braſs, wool, *&c.* ſuch are ſmiths, weavers, carpenters, *&c.* If any ſuch conſpire not to work under certain prices, they are liable to divers penalties. Perſons that contract with artificers in wool or metals to go out of the kingdom, ſhall be fined in any ſum not exceeding 100 l. and impriſoned for three months. If artificers, that are abroad, do not return in ſix months after warning, they ſhall be deemed aliens, and be incapable of inheriting lands by deſcent.

ARTIFICIAL, in a general ſenſe, denotes ſomething made, faſhioned, or produced by art, in contradiſtinction to the productions of nature.

This term is as extenſive as the works of art: thus we ſay, artificial day, globe, fountain, lightening, magnet, rainbow, *&c.* See the articles DAY, GLOBE, *&c.*

ARTILLERY, large fire-arms of all ſorts, with their appurtenances, as cannons, mortars, bombs, petards, muſquets, carabines, *&c.* See the articles CANNON, MORTAR, *&c.*

Some aſcribe the invention of artillery to Albertus; yet there is reaſon to believe that they are miſtaken. John Matthew de Luna, who lived 150 years ago, maintains, though againſt the conſtant opinion of Polydorus, Magius, Mayer, Pancirollus, Florentius, Rivolt, and Bezoldus, that Albertus Magnus found out the uſe of great guns, ſmall, and piſtols; but we cannot find, in all theſe authors, any thing which comes near this opinion, except that the experiment was made of theſe engines in his time by a German monk named Berthold Schuantz, or by a chemiſt who lived in the city of Cologn, where Albertus reſided, after he took the habit of a Dominican.

ARTILLERY-PARK, the place in the rear of both lines, in the army, for encamping the artillery, which is drawn up in lines, of which one is formed by the guns: the ammunition waggons make two or three lines, ſixty paces behind the guns, and thirty diſtant from one another: the pontoons and tumbrils make the laſt line. The whole is ſurrounded with a rope, which forms the park; the gunners and matroſſes encamp on the flanks, and the bombardeers, pontoon-men, and artificers, in the rear.

ARTILLERY-TRAIN, a certain number of pieces of ordnance, mounted on carriages, with all their furniture fit for marching, as mortar-pieces, cannons, bombs, carcaſſes, *&c.* There are trains of artillery in moſt of the king's magazines, as at the Tower, Portſmouth, Plymouth, *&c.*

The writers upon artillery are Caſimir, Semionowitz, Brechtelius, Buchnerus, Braunius, Mieth, and S. Remy, in his memoirs d'Artillerie, which contains an accurate deſcription of all the machines and inſtruments of war.

The term artillery is alſo applied to the antient inſtruments of war, as the catapulta, battering-ram, *&c.*

ARTILLERY-COMPANY, a band of infantry, conſiſting of ſix hundred men, making part of the militia or city guard of London.

ARTIST, a perſon ſkilled in ſome art. See the article ART.

ARTOIS, a province of the french Netherlands, ſituated between Flanders and Picardy.

ARTOTYRITES, in church-hiſtory, a ſect of chriſtians who uſed bread and cheeſe in the euchariſt, or bread, perhaps, baked with cheeſe; urging, in defence of

of this practice, that in the first ages of the world, men offered to God the fruits of their flocks, as well as those of the earth.

ARVALES FRATRES, in roman antiquity, a college of twelve priests, instituted by Romulus, who himself made one of the body: they assisted in the sacrifices of the ambervalia, offered annually to Ceres and Bacchus, for the prosperity of the principal fruits of the earth, *viz.* those of corn and wine.

ARUBA, a small island on the coast of Terra Firma, subject to the Dutch, and situated in 69° 30′ west longitude, and 12° 30′ north latitude.

ARUM, WAKE-ROBIN, or CUCKOW-PINT, in botany, a genus of plants, the flower of which consists of one petal, resembling in some measure a hare's ear; and its fruit is a roundish, unilocular berry, containing several seeds of the same shape.

This genus belongs to the *gynandria polyandria* class of Linnæus, who makes it comprehend the *arum*, *arisarum*, *colocasia*, and *dracunculus* of other botanists.

The root of arum is esteemed good in scorbutic cases, in the asthma, and obstructions of the bronchia, &c.

ARUNDEL, a town of Sussex, situated on a river of the same name, in 30′ west longitude, and 50° 45′ north latitude.

It gives the title of earl to the noble family of the Howards, and sends two members to parliament.

ARUNDO, COMMON REED, in botany, a genus of the triandria digynia class of plants, the calyx of which is a glume formed of two oblong, acuminated valves, not aristated, one longer than the other. The corolla is formed of two valves of the length of the cup, of an oblong, acuminated figure, with a lanuginous matter at the base, of the length of the flower: the corolla adheres to the seed, and serves as a pericarpium: the seed is single, oblong, pointed, and downy at the base.

ARUSPICES, or HARUSPICES, an order of priesthood, among the Romans, that pretended to foretel future events by inspecting the entrails of victims killed in sacrifice; they were also consulted on occasion of portents and prodigies. It appears that women were admitted into this order.

ARYTÆNOIDES, in anatomy, the name of two cartilages, which, together with others, constitute the head of the larynx. It is also applied to some muscles of the larynx.

ARYTÆNOIDEUS, in anatomy, one of the muscles that closes the larynx, having its head in one arytænoid cartilage, and its tail in the other; serving at once to bring them together, and to shut the rima, or glottis.

ARYTHMUS, ἀρυθμος, in medicine, the want of a just modulation in the pulse. It is opposed to eurythmus, a pulse modulated agreeably to nature.

ARZEL, among sportsmen, is said of a horse that has a white mark upon the far foot behind.

ARZILLA, a sea-port town of the empire of Morocco, situated about fifteen miles south of Tangier, in 5° 40′ west longitude, and 35° 40′ north latitude.

AS, in antiquity, a particular weight, consisting of twelve ounces; being the same with *libra*, or the roman pound.

As was also the name of a roman coin, which was of different matter and weight, according to the different ages of the commonwealth.

It is also used to signify an integer, divisible into twelve parts, from which last acceptation it signified a whole inheritance.

The *as* had several divisions, the principal of which were the *uncia*, or ounce, being the twelfth part of the *as*; *sextans*, the sixth part of the *as*; *quadrans*, the fourth part; *trions*, the third part; and *semis*, half the *as*, or six ounces. *Bes* was two thirds of the *as*, or eight ounces; and *dodrans*, three-fourths of the *as*.

ASA, in the materia medica, a name given to two very different vegetable productions, distinguished by epithets expressive of their smell.

Asa fœtida is a very stinking gum, drawn, according to Kemfer, from the root of an umbelliferous plant, which grows in the province of Chorasan, in Persia. It has large, thick roots, with few fibres, black without, but very white within, and full of a white fœtid juice, and is recommended in medicine to promote the menses, in hysteric affections, and in all nervous complaints.

ASA DULCIS. See the article BENSOIN.

ASAPH, or St. ASAPH, a city of Flintshire, in north Wales, situated about twenty miles north-west of Chester, in 3° 30′ west long. and 53° 18′ north lat.

ASAPPES, or AZAPES, in the turkish armies, a name given to the auxiliary troops which they raise among the christians

tians under their dominion, and expoſe to the firſt ſhock of the enemy.

ASARUM, or ASARABACCA, in botany, a genus of plants, without any flower-leaves, and belonging to the *dodecandria monogynia* claſs of Linnæus. Its fruit is a coriaceous capſule, divided into ſix cells, and containing a great many oval ſeeds. See plate XXII. fig. 3.

Aſarum is a powerful emmenagogue, and recommended by ſome in the gout, dropſy, and many other chronic complaints.

ASBESTINE, whatever partakes of the nature of the aſbeſtus, as aſbeſtine paper, aſbeſtine cloth. See the next article.

ASBESTUS, ἀσβεστος, in natural hiſtory, a fibroſe, flexile, incombuſtible, and elaſtic body, compoſed of ſingle and continuous filaments.

There are many ſpecies of aſbeſtus, with which the antients were well acquainted; and the art of ſpinning and making it into cloth, was certainly well known among them. Signor Ciampi, of Rome, was ſucceſsful enough to make cloth of ſome of the kinds, by ſteeping the ſtone in water, opening and dividing it with his hands, and then gently carding it as wool, and ſpinning it from off the cards with much care into a coarſe thread; which being worked into a cloth, by the help of other thread to hold it together, and thrown into the fire, leſt the compoſition intirely of aſbeſtus. Some writing paper made of aſbeſtus is preſerved in the Britiſh Muſeum at London. For the other properties of the aſbeſtus, ſee the article AMIANTHUS.

ASCARIDES, in medicine, a ſlender kind of worms, not unfrequently voided by ſtool. See the article WORMS.

ASCENDANT, ASCENDENT, or ASCENDING LINE, among lawyers, is meant of anceſtors, or ſuch relations as are nearer the root of the family. Such are the father, grandfather, great uncle, &c. Marriage is always forbidden between the aſcendants and deſcendants in a right line.

ASCENDANT, in aſtrology, that degree of the equator which riſes above the horizon in the eaſt, when any perſon is born, called alſo the angle of the firſt houſe in a ſcheme of horoſcope.

ASCENDENS OBLIQUUS, in anatomy, the ſame with the obliquus internus abdominis. See the article OBLIQUUS.

ASCENDING, in aſtronomy, is ſaid of ſuch ſtars as are riſing above the horizon, in any parallel of the equator.

ASCENDING *latitude of a planet*. See the article LATITUDE.

ASCENDING NODE. See the article NODE.

ASCENDING SIGNS, among aſtrologers, thoſe riſing from the nadir towards the zenith.

ASCENDING VESSELS, in anatomy, thoſe which carry the blood upwards, as the aorta aſcendens, and vena cava aſcendens. See the articles AORTA and VENA.

ASCENSION, *aſcenſio*, denotes, in general, a riſing, or moving upwards.

ASCENSION, in aſtronomy, the riſing of the ſun or a ſtar, or any part of the equinoctial with it, above the horizon, is either right or oblique.

Right aſcenſion is that degree of the equator, reckoned from the beginning of aries, which riſes with the ſun or a ſtar, in a right ſphere. It is found by the following proportion. As the radius to the coſine of the ſun or ſtar's greateſt declination, ſo is the tangent of the diſtance from aries to libra, to the tangent of right aſcenſion.

Oblique aſcenſion is that degree and minute of the equinoctial, counting from the beginning of aries, which riſes with the center of the ſun or a ſtar, or which comes to the horizon at the ſame time as the ſun or ſtar, in an oblique ſphere. In order to find the oblique aſcenſion, we muſt firſt find the aſcenſional difference. See the article ASCENSIONAL, &c.

The arch of right aſcenſion coincides with the right aſcenſion itſelf, and is the ſame in all parts of the globe. The arch of oblique aſcenſion coincides with the oblique aſcenſion, and changes according to the latitude of places.

Refraction of ASCENSION. See the article REFRACTION.

ASCENSION DAY, a feſtival of the chriſtian church, held ten days before Whitſuntide, in memory of our Saviour's aſcending into heaven after his reſurrection.

ASCENSION-ISLAND, an uninhabited iſland, lying almoſt in the midway between Africa and Brazil, in 17° weſt longitude, and 7° ſouth latitude.

ASCENSIONAL, in a general ſenſe, ſomething belonging to aſcent, or aſcenſion. See the article ASCENSION.

ASCENSIONAL DIFFERENCE, the difference between the right and oblique aſcenſion of any point in the heavens; or it is the ſpace of time, that the ſun riſes or ſets before or after ſix o'clock.

The aſcenſional difference may be found by this proportion, *viz.* As the radius is

to the latitude of the place, ſo is the tangent of the ſun's declination to the ſine of the aſcenſional difference; by ſubſtracting of which from the right aſcenſion, when the ſun is in the northern ſigns, and adding it, when the ſun is in the ſouthern ones, you will find the oblique aſcenſion.

ASCENT, *aſcenſus*, in a general ſenſe, the motion of a body upwards.

The aſcent of light bodies is now well known to be owing to the preponderancy of heavier ones, whereby they are impelled upwards.

ASCENT *of bodies on inclined planes*. See the article PLANE.

ASCENT *of fluids*, is particularly underſtood of their riſing above their own level between the ſurfaces of nearly contiguous bodies, or in ſlender capillary glaſs tubes, or in veſſels filled with ſand, aſhes, or the like porous ſubſtance. See the articles FLUID and ATTRACTION.

ASCENT *of Vapours*. See the articles CLOUD and EXHALATION.

ASCENT, in aſtronomy. See ASCENSION.

ASCETICS, in church-hiſtory, ſuch chriſtians in the primitive church as inured themſelves to great degrees of abſtinence and faſting, in order to ſubdue their paſſions. In ſhort, every kind of uncommon piety laid claim to the name aſcetic.

The aſcetics of St. Baſil is the title of a book upon ſpiritual exerciſe.

ASCHAFFENBURG, a city of Germany, ſituated on the river Mayne, in the circle of the lower Rhine, about twenty miles eaſt of Frankfort, in 9° eaſt longitude, and 50° 15′ north latitude.

ASCII, among geographers, an appellation given to thoſe inhabitants of the earth, who, at certain ſeaſons of the year, have no ſhadow: ſuch are all the inhabitants of the torrid zone, when the ſun is vertical to them.

ASCITES, in medicine, the common dropſy. See the article DROPSY.

ASCLEPIAD, *aſclepiadeus*, in antient poetry, a verſe compoſed of four feet, the firſt of which is a ſpondee, the ſecond a choriambus, and the two laſt dactyls; or of four feet and a cæſura, the firſt a ſpondee, the ſecond a dactyl, after which comes the cæſura, then the two dactyls, as

Mæcenas atavis edite regibus.

ASCLEPIAS, SWALLOW-WORT, in botany, a genus of the pentandria digynia claſs of plants, the calyx of which is a permanent perianthium, divided into five acute and ſmall ſegments; the corolla conſiſts of a ſingle petal, divided into five deep ſegments at the mouth; and its fruit conſiſts of two follicles or vaginæ, containing a great number of imbricated ſeeds, winged with down. See plate XXII. fig. 4.

The root of this plant is eſteemed ſudorific, emmenagogue, and is frequently preſcribed as an alexipharmic, eſpecially among the Germans: it appears to poſſeſs much the ſame medicinal virtues with valerian, only that this laſt is indiſputably preferable to it. See VALERIAN.

ASCODRUTÆ, in church-hiſtory, a ſort of gnoſtics, who placed all religion in knowledge, and under pretence of ſpiritual worſhip, would admit of no external or corporeal ſymbols whatever.

ASCOLI a city in the marquiſate of Ancona, in Italy, ſituated on the river Tronto, in 15° eaſt longitude, and 42° 50′ north latitude.

ASCOLI is alſo a city of the kingdom of Naples, ſituated in the province of Capitonata, in 16° 30′ eaſt longitude, and 41° 15′ north latitude.

ASCOLIA, in grecian antiquity, a feſtival celebrated by the athenian huſbandmen, in honour of Bacchus, to whom they ſacrificed a he-goat, becauſe that animal deſtroys the vines. Out of the victim's ſkin it was cuſtomary to make a bottle, which, being filled with oil and wine, fell as a reward to him who firſt fixed himſelf upon it with one foot.

ASCYRUM, in botany, a genus of plants with a roſaceous flower, and an oblong capſular fruit, formed of two valves, and containing a number of ſmall, roundiſh ſeeds. It belongs to the *polyadelphia polyandria* claſs of Linnæus, and is ſo nearly allied to the *hypericum*, that Tournefort makes them the ſame genus; from which however, it is diſtinguiſhed, by having only four petals, whereas the *hypericum* has five.

ASH, FRAXINUS, in botany. See the article FRAXINUS.

ASHBURTON, a town of Devonſhire, ſituated about twenty-two miles ſouth-weſt of Exeter, in 4° 15′ weſt longitude, and 50° 30′ north latitude.

ASHBY DE LA ZOUCH, a market-town of Leiceſterſhire, ſituated about fifteen miles north-weſt of Leiceſter, in 1° 25′ weſt longitude, and 52° 40′ north latitude.

ASHES, the earthy part of wood and other combuſtibles, remaining after they are conſumed by fire. Theſe, if produced from a vegetable, are of a white colour, and

and ſaltiſh taſte, a few inſtances excepted, and when boiled with fair water, yield a lixivium of an acrimonious alkaline fiery urinous taſte. The aſhes of all vegetables are vitrifiable, and are found to contain iron.

Aſhes of all kinds contain a very rich fertile ſalt, and are an excellent manure for cold and wet ground. They are alſo of conſiderable uſe in making *lixiviums* or lyes, for the purpoſes of medicine, bleaching, and for ſugar works, and are diſtinguiſhed by various names, as pot-aſhes, pearl-aſhes, wood-aſhes, and weed-aſhes. See POT-ASH, *&c.*

The antients preſerved the aſhes of their dead anceſtors in urns. See URN.

ASHFORD, a market town of Kent, ſituated about twelve miles ſouth-weſt of Canterbury, in 45′ eaſt longitude, and 51° 15′ north latitude.

ASIA, one of the four grand diviſions of the earth, ſituated between 25° and 148° eaſt longitude, and between the equator and 72° north latitude, and bounded by the frozen ocean on the north, by the pacific ocean on the eaſt, by the indian ocean on the ſouth, by the red-ſea on the ſouth-weſt, and by the mediterranean and euxine ſeas, *&c.* on the weſt and north-weſt; being 4800 miles long from eaſt to weſt, and 4300 broad from north to ſouth.

Aſia is ſubdivided into the eaſtern, middle, and weſtern diviſions; the firſt comprehending the empire of China, chineſe Tartary, and the aſiatic iſlands lying ſouth, and eaſtward of China; the ſecond or middle, comprehending India, Uſbec-tartary, Calmuc-tartary, and Siberia; and the third, or weſtern diviſion, comprehending Perſia, Arabia, Aſtracan, Circaſſian-tartary, and Turkey in Aſia. In painting, Aſia is repreſented by a woman, wearing a garland of various flowers and fruits; dreſſed in a rich, embroidered veſtment; holding in her right-hand, branches and roots of caſſia, pepper, cloves, *&c.* and in her left, a ſmoaking cenſer; with a camel kneeling by her.

Leſſer ASIA, the ſame with Natolia. See the article NATOLIA.

ASIATIC, ſomething peculiar to Aſia: thus we ſay, aſiatic ſtile, aſiatic fruits, *&c.* See the article STILE, *&c.*

ASIDE, in the drama, ſomething ſaid by an actor, which ſome, or even all the other actors preſent, are ſuppoſed not to hear; a practice juſtly condemned, as being unnatural and improbable.

ASILUS, in the hiſtory of inſects, the hornet-fly, or waſp-fly.

ASINUS, the ASS, in zoology, See the the article ASS.

ASOPH, a city of Coban Tartary, ſituated on the ſouth ſhore of the river Don, near its mouth, in 44° eaſt longitude, and 47° 15′ north latitude.

ASP, *aſpis*, in zoology, a ſpecies of anguis. See the article ANGUIS.

ASPALATHUS, ASPALATH, in botany, a genus of the diadelphia-decandria claſs of plants, the calyx of which conſiſts of a ſingle-leafed perianthium, divided into five ſegments: the corolla is papilionaceous; the fruit is a roundiſh, turgid, unilocular, bivalve pod; the ſeed is ſingle, and frequently kidney-ſhaped.

In the materia medica this plant is alſo called roſewood, and rhodianwood, and accounted by the antients an aſtringent, but now is almoſt quite rejected, as an internal medicine. An oil drawn from it is of an admirable ſcent, and very comfortable to the head, where perfumes are not offenſive. It is chiefly uſed in ſcenting pomatums and liniments. See RHODIUM LIGNUM.

ASPARAGUS, in botany, a genus of the hexandria monogynia claſs of plants, having no calyx: the corolla is of an oblong campanulated figure; it is compoſed of ſix petals, cohering at their tips: they are oblong formed into a tube, and tho' three inner ones are alternately placed, and reflex at the extremity, they are all permanent: the fruit is a roundiſh berry, containing two ſmooth ſeeds of the ſame ſhape.

The root of this plant is deſervedly reckoned one of the five openers, and is an ingredient in all compoſitions, intended to cleanſe the viſcera, eſpecially where their obſtructions threaten the jaundice and dropſy. It is likewiſe uſed in many diſorders of the breaſt, as operating by urine, it is of ſervice in moſt ſuch caſes.

ASPECT, in aſtronomy, denotes the ſituation of the planets and ſtars, with reſpect to each other; whereof we find mention of five kinds: 1. Sextile aſpect is when the planets or ſtars are 60° diſtant, and marked thus ✶. 2. The quartile, or quadrate, when they are 90° diſtant, marked □. 3. Trine, when 120° diſtant, marked △ 4. Oppoſition, when 180° diſtant, marked ☍. And, 5. Con-

junction, when both in the ſame degree, marked ☌.

Kepler, who added eight new ones, defines aſpect to be the angle formed by the rays of two ſtars meeting on the earth, whereby their good or bad influence is meaſured; for it ought to be obſerved, that theſe aſpects being firſt introduced by aſtrologers, were diſtinguiſhed into benign, malignant, and indifferent; the quartile and oppoſition being accounted malign, the trine and ſextile, benign or friendly, and the conjunction indifferent.

Double ASPECT, in painting, is uſed where a ſingle figure is ſo contrived, as to repreſent two or more different objects, either by changing the poſition of the eye, or by means of angular glaſſes. See the articles MIRROUR and ANAMORPHOSIS.

ASPEN-TREE, in botany, the poplar with trembling leaves. See POPLAR.

ASPER, in grammar, an accent peculiar to the greek language, marked thus (') and importing that the letters over which it is placed, ought to be ſtrongly aſpirated, or pronounced as if an *h* were joined with them.

ASPER, or ASPRE, in commerce, a turkiſh coin, three of which make a medine, and worth ſomething more than our half-penny.

ASPERA ARTERIA, in anatomy, the ſame with the wind pipe, or trachea. See TRACHEA and ARTERY.

ASPERIFOLIATE, or ASPERIFOLIOUS, among botaniſts, ſuch plants as are rough leaved, having their leaves placed alternately on their ſtalks, and a monopetalous flower divided into five parts. Of this claſs are bugloſs, borage, &c. See the articles BUGLOSS, &c.

ASPERITY, the inequality of the ſurface of any body, which hinders the hand from paſſing over it freely.

According to the teſtimony of blind perſons, we have reaſon to believe that every colour hath its particular degree of aſperity.

ASPERSION, the act of ſprinkling.

ASPERUGO, in botany, a genus of the pentandria monogynia claſs of plants, the flower of which conſiſts of one rotated petal, divided into ſeveral ſegments at the limb; and its calyx, which is divided like the flower-petal, contains the ſeeds, which are four in number, and of a roundiſh compreſſed figure. See plate XXII. fig. 5.

ASPERULA, WOODRUFFE, in botany, a genus of the tetrandria monogynia claſs of plants, the flower of which conſiſts of one petal, divided into four ſegments at the limb; and its fruit is compoſed of two roundiſh, dry berries, adhering together, in each of which is a ſingle ſeed of the ſame roundiſh ſhape.

The leaves and roots of this plant are eſteemed aperient and diuretic, and conſequently preſcribed in the jaundice, and obſtructions of the viſcera.

ASPHALITES, a term applied by ſome anatomiſts to the fifth vertebra of the loins. See the article VERTEBRÆ.

ASPHALTUM, in natural hiſtory, a ſolid dry opake inflammable ſubſtance, found in Egypt, about the dead ſea, and in many places of Europe, in detached maſſes of no regular ſtructure, breaking eaſily in any direction, very light, fuſible, and after burning ſome time with a greeniſh white flame, leaving a reſiduum of white aſhes. Dr. Hill enumerates three ſpecies of it, the firſt being the bitumen judaicum, which is of a diſcutient quality, promotes the menſtrual diſcharge, and enters as an ingredient into the venice treacle. See the article BITUMEN.

ASPHODEL, *aſphodelus*, in botany, a genus of the hexandria monogynia claſs of plants, the flower of which is liliaceous, conſiſting of a ſingle petal, divided into ſix ſegments; and its fruit is a globoſe-trilocular capſule, containing a number of triangular ſeeds, gibbous on one ſide. See plate XXIII. fig. 1.

The roots of aſphodel are diuretic, and ſaid to promote the menſes: their aſhes too, if rubbed on the affected part in an alopecia, cauſe new hair to grow.

ASPHURELATA, in natural hiſtory, are ſemi-metallic foſſils, fuſible by fire, and not malleable in their pureſt ſtate, being in their native ſtate intimately mixed with ſulphur and other adventitious matter, and reduced to what are called ores.

Of this ſeries of foſſils, there are only five bodies, each of which makes a diſtinct genus, and theſe bodies are antimony, biſmuth, cobalt, zinc, and hydrargyrum, or quickſilver. See the articles ANTIMONY, &c.

ASPIRATE, in grammar, denotes words marked with the ſpiritus aſper. See the article ASPER.

ASPIRATION, *aſpiratio*, among grammarians, is uſed to denote the pronouncing a ſyllable with ſome vehemence; as theſe words beginning with the letter H, *bear*, *beat*, which are pronounced more ſoftly without the H, as *ear*, *eat*.

ASPIS,

Fig. 1. ARMILLARY SPHERE.

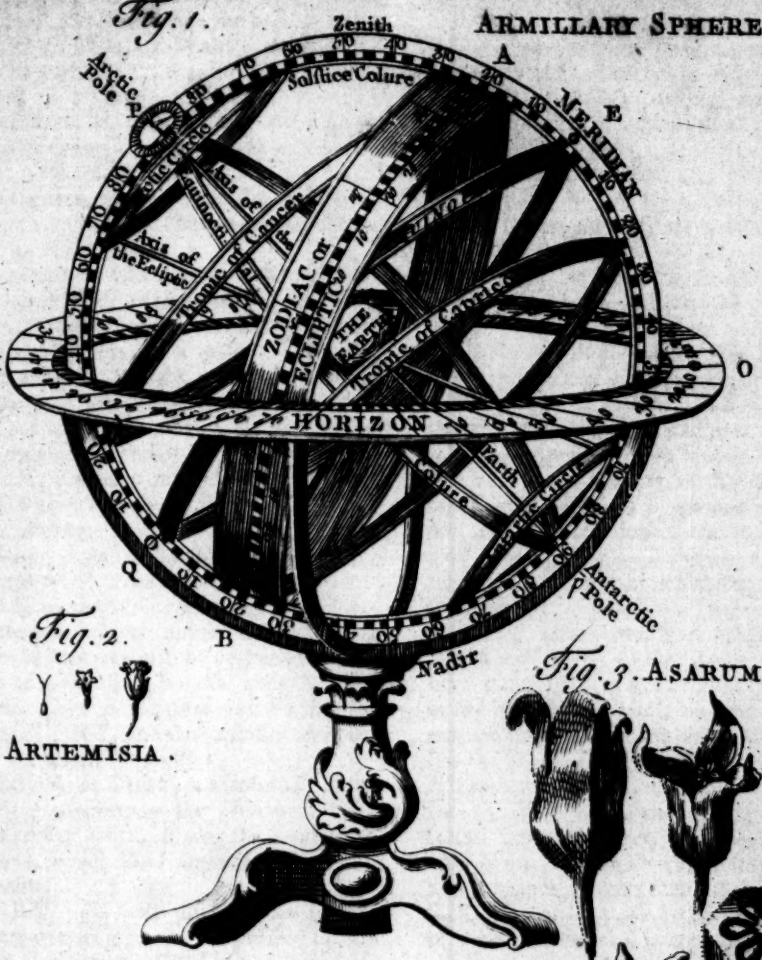


Fig. 2.

ARTEMISIA.

Fig. 3. ASARUM.



Fig. 4. ASCLEPIAS.

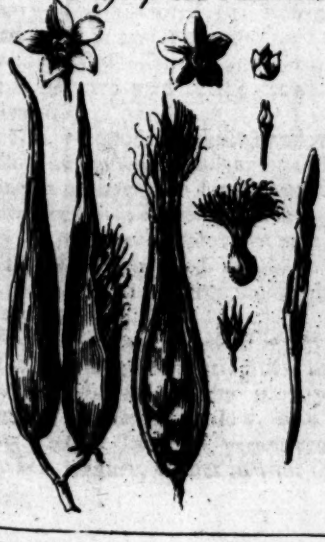


Fig. 5. ASPERUGO.



T. Jefferys sculp.

BRITISH MUSEUM

ASPIS, the ASP, in zoology, a ſpecies of anguis. See the article ANGUIS.

ASPLENIUM, MILT-WASTE, or SPLEEN-WORT, in botany, a genus of cryptogamious plants, the fructification of which is arranged in cluſters, and diſpoſed in form of ſtrait lines, under the diſk of the leaf. See plate XXIII. fig. 2.

This genus comprehends the *aſplenium*, *lingua cervina*, and *trichomanes* of different botaniſts.

ASS, *aſinus*, in zoology, a quadruped of the horſe-kind, with a long head, long ears, a round body covered with a ſhort and coarſe fur, of a pale dun colour, with a ſtreak of black running down its back, and acroſs the ſhoulders, and a tail not hairy all the way, as in a horſe, but only at the end.

The aſs is wild in many warm countries, and particularly in Africa. See the article ZEBRA.

ASSA, or ASA DULCIS and FOETIDA. See the article ASA.

ASSAI, in muſic, ſignifies *much*, and according to others, that the motion of the piece be kept in a middle degree of quickneſs or ſlowneſs. As aſſai allegro, aſſai preſto. See ALLEGRO and PRESTO.

ASSAILLANT, one that aſſaults another. See the article ASSAULT.

ASSARON, or OMER, a meaſure of capacity, in uſe among the Hebrews, containing five pints. It was the meaſure of manna, which God appointed for every Iſraelite.

ASSART, *aſſartum*, in law, an offence committed in a foreſt, by pulling up the trees by the roots. This is a greater treſpaſs than waſte.

A perſon, however, may ſue out a licence to aſſart ground in a foreſt; that is, to clear it, and make it arable: and from hence lands are called aſſarted, and formerly aſſart rents were paid to the crown for ſuch lands.

ASSASSIN, a perſon who kills another by attacking him at ſome diſadvantage. It is alſo meant of one who hires himſelf to murder a perſon to whom he is a ſtranger, in order to revenge the quarrel of another.

ASSATION, a term uſed in pharmacy, for a peculiar kind of decoction of plants in their own juice.

ASSAULT, in law, a violent injury offered to a man's perſon, being of a higher nature than battery; for it may be committed by offering a blow, or a terrifying ſpeech. In caſe a perſon threatens to beat another, or lies in wait to do it, if the other is hindered in his buſineſs, and receives loſs, it will be an aſſault, for which action may be brought, and damages recovered. Not only ſtriking, but thruſting, puſhing, caſting ſtones, or throwing drink in the face of any perſon, are deemed aſſaults.

In all which caſes a man may plead in his juſtification, the defence of his perſon or goods, father, mother, wife, maſter, &c.

ASSAULT, in the military art, a furious effort made to carry a fortified poſt, camp, or fortreſs, wherein the aſſailants do not ſcreen themſelves by any works: while the aſſault continues, the batteries ceaſe, for fear of killing their own men.

ASSAY, ESSAY, or SAY, in metallurgy, the trial of the goodneſs and purity of metals, and metalline ſubſtances. Hence,

ASSAYING, is the art of finding how much pure metal is contained in every ore, or the proportion of the ſeveral ingredients of any mixed metal: or it may be defined, the art of ſeparating metals, ſemi-metals, ſulphurs, and mineral ſalts from each other, and from other bodies mixed with them, ſo that it may appear, what quantity there was originally of each in the body under trial, or what benefit may be reaped from the extracting of it. See the article ORE.

All minerals are the objects of this art: for the bodies aforeſaid being ſeldom found naturally pure, and under their true form, but moſt commonly mixed and confounded with each other, a thouſand different ways, and with many kinds of earth and ſtones; it is proper that the workman ſhould know the nature of all theſe things, to be able to determine, what is requiſite for the ſeparation of them.

In order to the aſſaying of gold-ores, it muſt be obſerved, that the method varies according to the nature and diſpoſition of the mineral matters, along with which the metals happen to be mixed, whether it be ſtony, earthy, ſulphureous, arſenical, &c. The art of making aſſays with diſpatch upon gold and ſilver ores depends upon the ſcorification or vitrification of thoſe heterogeneous foſſile ſubſtances, which may be incorporated therewith: lead and the glaſs of lead, and antimony and its glaſs, being great ſcorificators or vitrifiers, they become the natural agents upon ſuch occaſions. See SCORIFICATION, VITRIFICATION, and QUARTATION.

The ultimate refinement of gold is thought to be that procured by fuſing it thin along with

with thrice its own weight of antimony, wherein the antimony tears away, and imbibes the ſubſtance of all the other metals, but leaves the gold untouched, which therefore, as the heavier body, falls like a regulus to the bottom of the melting cone. See the article ANTIMONY.

In caſe there is a ſmall or fine gold-ſand to aſſay, or a very rich and delicate ſlud, both the proof by a ſmall aſſay, and the extraction in the large way, are ſometimes effected by amalgamation. Thus a certain parcel of it being weighed out, it is mixed with a determinate proportion of mercury, eight or ten times its quantity, and a quantity either of ſimple or ſalt water poured warm to them in a ſtone-mortar; let them be ground together, for ſome time, with a wooden peſtle; then the ſand is dilated by the addition of a little more water, that the mercurial particles may firſt ſubſide, which being now connected into one maſs, the ſand, in a little baſon, is eaſily waſhed off; then the mercury, being ſqueezed through leather, the particles of gold, that were collected and imbibed by it, remain behind, mixed with about one third part of the mercury in the form of a ſoft maſs, or amalgam, which being expoſed in a little glazed diſh to a gentle fire, the mercury is thus evaporated, and leaves the gold in powder, which may now be weighed, to ſhew in what proportion the ſandy or ſluddy ore contains it. The like method of management will ſerve for the aſſaying of ſilver ores. See AMALGAMATION and SILVER.

Accurate aſſays upon the ores of the inferior metals, as lead, tin, copper, and iron, require proper furnaces, the due applications of fire, and ſuitable fluxes adapted to the reſpective ores; and indeed ores of the ſame kind frequently require different methods of aſſaying, as well as ſmelting. See the articles FLUX, SMELTING, FURNACE, TIN, &c.

In order to the due ſeparation of metals from metals, or of a confuſed mixture of metals, ſuch as thoſe commonly called electrums, or ſuch as the corinthian braſs of old was ſuppoſed to be, we muſt obſerve, that experience has taught us a certain effect of lead, which could not be well conceived *a priori*: this is more effectually and ſooner done by a proper glaſs of antimony, *viz.* that, by fuſion upon the coppel, it reſolves all the imperfect metals, without exception, into their ſmalleſt atoms, and partly throws them up into its furnace, in the form of a half vitrified powdery ſubſtance, in part ſinks along with them into the coppel, and in part converts them into glaſs, ſo as to leave nothing behind, but pure gold and ſilver.

Aſſaying of gold, by coppelling is thus performed: to the gold to be aſſayed, add a double quantity of fine ſilver; then having heated a coppel furniſhed with a muffle, in a reverberatory fire, let a ball of lead, of a weight proportionable to the quantity of gold to be aſſayed, be melted in it: in this, the mixture of gold and ſilver is to fuſe till it appear of an equal colour, and has fixed itſelf in a little lump, at the bottom of the coppel. This lump, after cooling in the furnace itſelf, is to be taken out, and the proceſs again repeated, till the lead be conſumed; after which, let the remaining maſs be weighed, and its weight compared with that of the original ingredients, will ſhew the purity or impurity of the gold.

Another ſtill more accurate method of aſſaying gold, is by means of acid menſtrua, thus: Let a mixed maſs of gold and ſilver be melted, with three or four times that weight of pure ſilver. Let it, when cold, be beaten into a thin plate, and put into a glaſs of proof aqua fortis in warm ſand: then the ſilver will ſoon be diſſolved, and the gold will precipitate to the bottom, in a black powder: by decanting this ſolution of ſilver with proper care, this laſt operation may be repeated, by adding a little freſh aqua fortis to the gold, and ſetting it in a heat ſomewhat ſtronger than before, in order to diſſolve any remains of ſilver in the gold powder; then find the proportion as in the firſt proceſs. See GOLD.

The method of aſſaying ſilver is the ſame, only that lead is put into the crucible, proportioned to the quantity and quality of the ſilver to be aſſayed; and in this manner alſo are the aſſays of any mixture, of the nobler with the ignobler metals, made.

For the method of aſſaying gold or ſilver by means of the touch-needle, See the article TOUCH-NEEDLE.

ASSAYING of weights and meaſures, the examining the common weights and meaſures by the clerk of the market.

ASSAYING in muſic, a flouriſhing before one begins to play; or the running diviſions, to lead one into the piece before us.

ASSAY-

ASSAY-MASTER, an officer appointed by certain corporations to make a juſt aſſay of all gold and ſilver brought to him, and to make a true report thereof.

ASSEMBLAGE, the uniting or joining of things together; or the things themſelves ſo united, or joined. It is alſo uſed in a more general ſenſe, for a collection of various things ſo diſpoſed and diverſified, as that the whole produces ſome agreeable effect.

ASSEMBLY, the meeting of ſeveral perſons, in the ſame place, upon the ſame deſign.

ASSEMBLY, in the beau monde, an appointed meeting of faſhionable perſons of both ſexes, for the ſake of play, gallantry, converſation, &c.

ASSEMBLY, in the military art, the ſecond beating of a drum before a march; at which the ſoldiers ſtrike their tents, roll them, and ſtand to arms.

ASSEMBLIES of the clergy are called convocations, ſynods, councils; the annual meeting of the church of Scotland is called a general aſſembly.

ASSEMBLIES of the roman people were called comitia.

ASSENT, *aſſenſus*, in a general ſenſe, an agreement to ſomething propoſed, or affirmed.

Aſſent is either explicit, by open declaration; or implicit, and inferred from certain circumſtances.

As to the degrees of aſſent due to any propoſition, it ought no doubt to be proportioned to the evidence offered for it. See the articles EVIDENCE, PROBABILITY, &c.

Royal ASSENT, the approbation given by the king to a bill in parliament, after which it becomes a law. See BILL.

ASSERTION, *aſſertio*, in the language of of the ſchools, a propoſition advanced by the aſſertor, who avows the truth of it, and is ready to defend it.

ASSESSOR, an inferior officer of juſtice, appointed chiefly to aſſiſt the ordinary judge with his opinion and advice.

ASSESSOR is alſo one who aſſeſſes, or ſettles taxes, and other public dues.

ASSEVERATION, a poſitive and vehement affirmation of ſomething.

ASSIDEANS, or HASSIDEANS, in jewiſh antiquity. See the article HASSIDEANS.

ASSIENTO, a ſpaniſh word, ſignifying a farm, in commerce, is uſed for a bargain between the king of Spain and other powers, for importing negroes into the ſpaniſh dominions in America, and particularly to Buenos Ayres. The firſt aſſiento was made by the french Guinea company; and by the treaty of Utrecht, transferred to the engliſh, who were to furniſh four thouſand eight hundred negroes annually.

ASSIGN, in common law, a perſon to whom a thing is aſſigned or made over.

ASSIGNEE, in law, a perſon appointed by another to do an act, tranſact ſome buſineſs, or enjoy a particular commodity. Aſſignees may be by deed or by law: by deed, where the leſſee of a farm aſſigns the ſame to another; by law, where the law makes an aſſignee, without any appointment of the perſon intitled, as an executor is aſſignee in law to the teſtator, and an adminiſtrator to an inteſtate. But when there is aſſignee by deed, the aſſignee in law is not allowed.

ASSIGNING, in a general ſenſe, is the ſetting over a right to another; and in a ſpecial ſenſe is uſed to ſet forth and point at, as to aſſign an error, to aſſign falſe judgment, to aſſign waſte; in which caſes it muſt be ſhewn wherein the error is committed, where and how the judgment is unjuſt, and where the waſte is committed.

ASSIGNMENT, the transferring the intereſt one has in a leaſe, or other thing, to another perſon. Aſſignments may be made of lands in fee for life or years, of an annuity, rent-charge, judgment, ſtatute, &c.

Novel ASSIGNMENT. See the article NOVEL ASSIGNMENT.

ASSIMILATION, in phyſics, called alſo motion of multiplication, and motion of ſimple generation, is that motion by which bodies convert other bodies related to them, or at leaſt ſuch as are prepared to be converted, into their own ſubſtance and nature. Thus flame multiplies itſelf upon oily bodies, and generates new flame; air upon water, and produces new air; and all the parts, as well ſimilar as organical, in vegetables and animals, firſt attract with ſome election or choice, nearly the ſame common, or not very different juices for aliment, and afterwards aſſimilate, or convert them into their own nature.

ASSISA, in law, the ſame with aſſiſe. See the article ASSISE.

ASSISA CADERE ſignifies to be nonſuited.

ASSISA NOCUMENTI, an aſſiſe of nuiſance.

ASSISA *cadit in juratam* ſignifies the thing in controverſy to be ſo doubtful, that it muſt be tried by a jury.

ASSISA *continuanda*, a writ iſſued to the juſtices of aſſiſe, for the continuance of a cauſe, where certain records alledged cannot be produced by the party.

ASSISA *proroganda*, a writ directed to the juſtices of aſſiſe, to ſtay proceedings, on account of the party's being employed in the king's buſineſs.

ASSISA *panis & cervisiæ*, the power of adjuſting the weight and meaſure of bread and beer.

ASSISÆ *judicium*, the judgment of the court given againſt the plaintiff or defendant, for default.

ASSISE, in old law-books, is defined to be an aſſembly of knights and other ſubſtantial men, with the juſtice, in a certain place, and at a certain time: but the word, in its preſent acceptation, is uſed for the court place, or time, when and where the writs and proceſſes, whether civil or criminal, are decided by judges and jury. In this ſignification, aſſiſe is either general, when judges make their reſpective circuits, with commiſſion to take all aſſiſe; or ſpecial, where a commiſſion is granted to particular perſons for taking an aſſiſe upon one or two diſſeiſins only. By Magna Charta, juſtices ſhall be ſent through every county, once a year, who, with the knights of the ſeveral ſhires, ſhall take aſſiſe of novel diſſeiſin: and as to the general aſſiſe, all the counties of England are divided into ſix circuits, and two judges are aſſigned by the king's commiſſion to every circuit, who now hold the aſſiſes twice a year, in every county, except Middleſex, where the courts of record ſit, and the counties palatine. Theſe judges have five ſeveral commiſſions: 1. Of oyer and terminer, by which they are empowered to try treaſons, felonies, &c. 2. Of gaol-delivery, which empowers them to try every priſoner in gaol, for whatever offence he be committed. 3. Of aſſiſe, which gives them power to do right upon writs brought by perſons wrongfully thruſt out of their lands and poſſeſſions. 4. Of niſi prius, by which civil cauſes come to iſſue in the courts above, are tried in the vacation by a jury of twelve men, in the county where the cauſe of action ariſes. 5. A commiſſion of the peace in every county of the circuit: and all juſtices of peace of the county, and ſheriffs, are to attend upon the judges, otherwiſe they ſhall be fined.

ASSISE is uſed in ſeveral other ſignifications; as, 1. For a jury, where aſſiſes of novel diſſeiſin are tried, and the pannels of aſſiſe ſhall be arraigned. See the next article. 2. For a writ for recovery of the poſſeſſions of things immoveable, of which a perſon and his anceſtors have been diſſeiſed. 3. For an ordinance or ſtatute, as the aſſiſe of the foreſt, a ſtatute concerning orders to be obſerved in the king's foreſt. 4. For a quantity of wheat, bread, &c. preſcribed by a ſtatute, as we ſay, when wheat is of ſuch a price, bread ſhall be of ſuch an aſſiſe.

ASSISE *of novel diſſeiſin* is a writ that lies where a tenent in fee ſimple, fee tail, or for term of life, is put out and diſſeiſed of his lands, tenements, rents, common of paſture, common way, &c. A writ of aſſiſe may ſometimes be had by a perſon, when he cannot have treſpaſs *vi & armis*; as where a lord enters on lands, and diſtrains his tenant ſo often, when nothing is due, that the tenant is diſturbed in manuring his lands; in ſuch caſe he may have *aſſiſe de ſouvent fois diſtreſs*; but he cannot bring treſpaſs againſt his lord.

ASSISE *of mort d'anceſtor* is a writ which lies where a perſon's father, mother, brother, &c. died ſeiſed of lands and tenements in fee, and after either of their deaths, a ſtranger abateth. See the article COSINAGE.

ASSISE *of darrein preſentment*. See the article QUARE IMPEDIT.

ASSISE *of utrum* lieth for a parſon againſt a layman, or a layman againſt a parſon, for lands or tenements doubtful whether they be lay-fee or free-alms.

This, and the three preceding writs of aſſiſe, in reſpect to the grand aſſiſe, are called petit aſſiſes; for as the grand aſſiſe ſerves for the right of property, ſo the petit aſſiſe ſerves to ſettle the right of poſſeſſion.

ASSISER, or ASSIZER, *of weights and meaſures*, an officer, who has the overſight of thoſe things. See the article CLERK *of the market*.

ASSISIS, or *Non ponendo in* ASSISIS. See the article NON PONENDO.

ASSISTANT, a perſon ſubſtituted to attend a principal officer, for the more eaſy and regular diſcharge of his function.

ASSISTANT, in roman catholic countries, a name given to a ſort of counſellors added to the ſuperiors of monaſteries, &c.

ASSISTANTS are alſo thoſe appointed to aſſiſt at the execution of a criminal.

ASSIZE, or ASSISE. See ASSISE.

ASSOCIATE, a partner, adjunct, fellow, or companion. See the next article.

ASSO-

ASSOCIATION, the act of associating or constituting a company, society, or partnership, wherein two or more persons unite for their mutual interest, or the joint carrying on an affair, *&c.*

ASSOCIATION *of ideas* is where two or more ideas constantly and immediately follow one another, so that the one shall almost infallibly produce the other, whether there be any natural relation between them, or not.

When our ideas have a natural correspondence and connection one with another, it is the office and excellency of our reason to trace these, and hold them together, in that union and correspondence, which is founded in their peculiar beings. But when there is no affinity between them, nor any cause to be assigned for their accompanying each other, but what is owing to mere accident or custom; this unnatural association becomes a great imperfection, and is, generally speaking, a main cause of error, or wrong deductions in reasoning.

To this wrong association of ideas, made in our minds by custom, Mr. Locke attributes most of the sympathies and antipathies observable in men, which work as strongly, and produce as regular effects, as if they were natural, tho' they at first had no other original than the accidental connection of two ideas, which either by the strength of the first impression, or future indulgence, are so united, that they ever after keep company together in that man's mind, as if they were but one idea.

The ideas of goblins and spirits have really no more to do with darkness than light; yet, let but these be inculcated often in the mind of a child, and there raised together, possibly he shall never be able to separate them again as long as he lives, but darkness shall ever afterwards bring with it these frightful ideas.

So if a man receive an injury from another, and thinks on the man and that action over and over, by ruminating on them strongly, he so cements these two ideas together, that he makes them almost one; he never thinks on the man, but the place and displeasure he suffered, come into his mind with it, so that he scarce distinguishes them, but has as much aversion for the one as the other. Thus, hatreds are often begotten from slight and almost innocent occasions, and quarrels are propagated and continued in the world.

Nor is its influence on the intellectual habits less powerful, tho' less observed. Let the ideas of being and matter be strongly joined, either by education or much thought, whilst these are still combined in the mind, what notions, what reasonings will there be about separate spirits? Let custom, from the very childhood, have joined figure and shape to the idea of God; and what absurdities will that mind be liable to about the deity? Some such wrong and unnatural associations of ideas will be found to establish the irreconcileable opposition between different sects of philosophy and religion; for we cannot suppose that every one of their followers will impose wilfully on himself, and knowingly refuse truth offered by plain reason. Some independent ideas, of no alliance to one another, are, by custom education, and the constant din of their party, so coupled in their minds that they always appear there together, and they can no more separate them in their thoughts, than if they were but one idea, and they operate as if they were so.

ASSOCIATION, in law, is a writ or patent sent by the king, either of his own motion, or at the suit of the plaintiff, to the judges of assise, to have others associated to them, to take the assise. Upon this patent of association, the king sends his writ to the justices of the assise, commanding them to admit these that are so sent.

ASSOILE, in our antient law-books, to absolve, free, or deliver one from excommunication.

ASSONANCE, in rhetoric or poetry, is where the words of a phrase or verse have nearly the same sound, or termination, but make no proper rhyme: these are usually accounted vicious in english, though the Romans sometimes used them with elegancy: as, *Militem comparavit, exercitum ordinavit, aciem instruxit.*

ASSONANT RHYMES, a resemblance of sound, not unfrequently used by spanish poets, instead of true rhymes; as *ligera* and *cubierta.*

ASSOS, a sea-port town of Natolia, situated about twelve miles south-east of Troas, in 27° 30′ east longitude, and 38° 30′ north latitude.

ASSUMPSIT, a voluntary or verbal promise, whereby a person assumes, or takes upon him to perform or pay any thing to another. When any person becomes legally indebted to another for goods sold, the law implies a promise that he will pay his debt; and if he do not pay it, the writ

indebitatus aſſumpſit lies againſt him; and will lie for goods ſold and delivered to a ſtranger, or third perſon, at the requeſt of the defendant: but the price agreed on muſt be proved, otherwiſe that action does not lie.

ASSUMPTION, a feſtival in the romiſh church, in honour of the miraculous aſcent of the Virgin Mary, body and ſoul, into heaven: The greek church, who alſo obſerve this feſtival, celebrate it on the fifteenth of Auguſt, with great ceremonies.

ASSUMPTION, in logic, is the minor or ſecond propoſition in a categorical ſyllogiſm.

ASSUMPTION is alſo uſed for a conſequence drawn from the propoſitions whereof an argument is compoſed. See the article CONSEQUENCE.

ASSUMPTION, in geography, a city of ſouth America, ſituated near the mouth of the river Plata, and on the oppoſite ſhore to Buenos Ayres, in 60° weſt lon. and 34° ſouth lat.

ASSUMTIVE ARMS, in heraldry, are ſuch as a perſon has a right to aſſume, with the approbation of his ſovereign, and of the heralds: thus, if a perſon, who has no right by blood, and has no coat of arms, ſhall captivate, in any lawful war, any gentleman, nobleman, or prince, he is, in that caſe, entitled to bear the ſhield of that priſoner, and enjoy it to him and his heirs for ever.

ASSURANCE, in logic. See the articles CERTITUDE, EVIDENCE, and DEMONSTRATION.

ASSURANCE, or INSURANCE, in commerce. See the article INSURANCE.

Policy of ASSURANCE, a ſort of contract, wherein one or more perſons are become bound to make good any damages which may befal a ſhip, houſe, *&c.* by means of ſea, fire, *&c.* or the like damages. See the article POLICY.

There are ſeveral offices of aſſurance from fire in London, as the Royal-exchange aſſurance, the Sun fire-office, the Hand-in-hand fire-office, the London aſſurance, *&c.* See the article INSURANCE.

There are alſo offices of aſſurance for life, in virtue whereof, when the perſon aſſured dies, a ſum of money, as was agreed upon, becomes due to the perſon to whom the policy of aſſurance was granted.

ASSUROR, a merchant, or other perſon, who makes out a policy of aſſurance, and thereby inſures a ſhip, houſe, or the like.

The aſſuror is not liable for what damages may ariſe from the negligence or other faults of the maſters or mariners; or even from any defect in the things aſſured.

ASSURRITANI, in church-hiſtory, chriſtian heretics, a branch of the donatiſts, who held, that the ſon was inferior to the father, and the holy ghoſt to the ſon: they rebaptized thoſe who embraced their ſect; and aſſerted that good men only were within the pale of the church.

ASSYRIA, an antient empire of Aſia, comprehending the modern provinces of Curdiſtan, Diarbec, and Irac-arabic.

ASSYTHMENT, in the law of Scotland, is a compenſation given for a man ſlain.

ASTER, STAR-WORT, in botany, a genus of the *ſyngeneſia-polygamia* claſs of plants, with a radiated flower, the diſk of which is compoſed of floſcules, and its border of ſemifloſcules; the receptacle is plane and naked, and the ſeeds are of an oblong figure, oval at top, and winged with down. See plate XXIII. fig. 3.

The ſeeds of ſtar-wort are accounted deobſtruent, its flowers cardiac, its leaves vulnerary, and the roots ſudorific and alexipharmic, and conſequently good in diſorders of the breaſt and lungs.

ASTER SAMIUS, SAMIAN EARTH. See the article SAMIAN EARTH.

ASTERABAT, a city of Perſia, capital of a province of the ſame name, ſituated on the ſouthern ſhore of the caſpian ſea, in 54° eaſt long. and 37° 30′ north lat.

ASTERIA, in natural hiſtory, a beautiful pellucid gem of variable colours, as viewed in different lights; called alſo *oculus cati*, or cat's-eye.

The variable colours, which are a pale brown and white, ſeem to be lodged deep in the ſtone, and ſhift about as that is moved. It is nearly allied to the opals, from which, however, it is diſtinguiſhed by its colour and ſuperior hardneſs.

ASTERIA is alſo the name of an extraneous foſſil, called in engliſh the ſtar-ſtone. See the article STAR-STONE.

ASTERIAS, in zoology, the ſtar-fiſh. See the article STAR-FISH.

ASTERISK, a mark, in form of a ſtar, *, placed over any word or ſentence, to render it more conſpicuous, or to refer the reader to the margin, or elſewhere, for a quotation, explanation, or the like.

ASTERISM, in aſtronomy, the ſame with conſtellation. See CONSTELLATION.

ASTEROPODIUM, a kind of extraneous foſſil, of the ſame ſubſtance with the *aſteriæ*,

tria, or ſtar-ſtones, to which they ſerve as a baſe. See the article STAR-STONE.

ASTHMA, in medicine, a painful, difficult, and laborious reſpiration, occaſioned by intolerable ſtraitneſs of the lungs, which, as it diſturbs the free circulation of the blood through the lungs, endangers a ſuffocation.

This diſorder is attended with violent motions of the diaphragm, abdominal and intercoſtal muſcles, to the very ſcapula, and pinnæ of the noſtrils. It is uſually divided into pneumonic and convulſive; the former of which is generally occaſioned by abounding in groſs, viſcous, or purulent humours, collected in the cavities of the lungs, which ſtop up the paſſages of the air, and compreſs the bronchia. That kind called the convulſive aſthma is occaſioned by an irregular motion of the animal ſpirits, either by reaſon of an obſtruction, or ſome other obſtacle.

The aſthma is either continual, or intermitting and periodical, and returns commonly when a ſober regimen is not obſerved.

This diſorder proves moſt violent while the patient is in bed, and in a prone poſture, as in that caſe the contents of the lower belly bearing againſt the diaphragm, leſſen the capacity of the breaſt, and leave the lungs leſs room to play.

The cure of the true or pneumonic aſthma is by bleeding, after which emetics may be uſed; and if the paroxyſm returns, epiſpaſtics, with glyſters inſtead of purges. Infuſions of *fim. equin.* or the juices thereof, are accounted excellent. Oxymel of quills and ſimple cinnamon-water, or garlic, are good in caſe of viſcid and tough humours, where anodynes are very hurtful.

For the convulſive kind, the cure is attempted by antepileptics, antihyſterics, antiſpaſmodics, opiates, *&c.* In the time of the fit, a glyſter is to be immediately given, and if no other ingredients for it be in readineſs, recent urine will ſerve; after this, bleeding is to be ordered, unleſs where there is a contra-indication, and after this the emotion of the blood is to be allayed by nitrous and cinnabarine powders; with theſe the gentle diaphoretics may be joined, eſpecially in caſe of of a fever attending it, which very frequently happens. Where the caſe is very urgent, a ſmall doſe of the ſtorax pill may be added to the powder, to be taken at night. Externally, ſpirit of wine and camphire may be rubbed on the breaſt and ſhoulders, eſpecially where the patient has been uſed to cupping, and has neglected it; rubbing the ſhoulders with a flannel, often has a good effect alſo; and fumigations may be uſed of amber, ſtorax, and maſtich, with the flowers of citrine ſtæchas. When the fit is off, the patient ſhould uſe frequent waſhing the feet in warm water, and ſhould be always blooded in the foot in ſpring and fall; he ſhould alſo take gentle purges at times, and if the neglect of habitual cuppings, or ſuppreſſions of the hæmorrhoids, or, in women of the menſes, have concurred, great care is to be taken to bring all back to their old ſtate again, otherwiſe no radical cure can be expected: finally, a mixture of ſpirit of hart's-horn, and tincture of ſalt of tartar, ſhould be given to promote an equal diſtribution of the blood to all parts of the body.

ASTI, a city of Piedmont, in Italy, ſituated upon the river Panaro, about thirty miles eaſt of Turin, in 8° 15′ eaſt long. and 44° 40′ north latitude.

ASTORGA, a city of the province of Leon, in Spain, ſituated on the river Inerto, about thirty miles ſouth-weſt of Leon, in 6° 20′ weſt long. and 42° 20′ north latitude.

ASTRACAN, a city of aſiatic Ruſſia, and capital of a kingdom of the ſame name. It is ſituated on the eaſtern ſhore of the river Wolga, about eighty miles north of the Caſpian ſea, in 52° eaſt longitude, and 47° north latitude.

ASTRÆA, in aſtronomy, the ſame with virgo. See the article VIRGO.

The poets feign that Juſtice quitted heaven to reſide on earth, in the golden age; but, growing weary of the iniquities of mankind, ſhe left the earth, and returned to heaven, where ſhe commenced a conſtellation of ſtars, and from her orb ſtills looks down on the ways of men.

ASTRAGAL, in architecture, a little round moulding, in form of a ring, ſerving as an ornament at the tops and bottoms of columns. See COLUMN.

Sometimes the aſtragal ſerves to ſeparate the faſciæ of the architrave; in which caſe it is wrought chaplet-wiſe, with beads and berries. It is alſo uſed both above and below the liſts, adjoining immediately to the dye, or ſquare of the pedeſtal.

ASTRAGAL, in anatomy. See the article ASTRAGALUS.

ASTRAGAL, in gunnery, a round moulding incompaſſing a cannon, about half a foot from its mouth.

ASTRAGALOIDES, WOOLY-ASTRAGALUS, in botany, a genus of the *diadelphia decandria* claſs of plants, with a papilionaceous flower, and an oblong unilocular-podded fruit, containing ſeveral kidney-like ſeeds.

ASTRAGALUS, MILK-VETCH, in botany, a genus of the *diadelphia-decandria* claſs of plants, with a papilionaceous flower, and bilocular-podded fruit, containing kidney-like ſeeds.

Aſtragalus is ſaid to be diuretic, and good for increaſing the milk of wet nurſes.

ASTRAGALUS, ἀστράγαλος, in anatomy, called alſo the *talus*, is the ſuperior and firſt bone of the foot, according to its natural ſituation and connection with the leg, being articulated with the tibia and fibula, and with the calcaneum; having its head formed for the articulation with the os naviculare.

ASTRAL, ſomething belonging to, or connected with the ſtars: thus, aſtral year is the ſame with ſiderial year.

ASTRANTIA, BLACK MASTER-WORT, in botany, a genus of umbelliferous plants, belonging to the *pentandria digynia* claſs of Linnæus, the flower of which is roſaceous, and collected into a ſort of head; and its fruit is oval, obtuſe, coronated, and ſtriated. See plate XXIII. fig. 5.

ASTRICTION, among phyſicians, denotes the operation of aſtringent medicines. See the next article.

ASTRINGENTS, *aſtringentia*, in pharmacy, medicines of the corroborative claſs, which, acting as a ſtimulus, criſp and corrugate the fibres into a more compact tone; corroborate the ſolids, which are weakened, and conſolidate ſuch as are corroded and wounded. Among the medicines of this claſs may be reckoned the herbs bunias, woad, cud-weed, rupture-wort, mint, yarrow, pimpinella, oak, ſanicle, and nettles; the flowers of balauſtines, red roſes; the fruits of barberries, cheſnuts, quinces, cypreſs-nuts, galls, acorns, pomegranates, medlars, mulberries, myrtleberries, hurtleberries, ſloes, raſpberries, ſervices, and pine-apples; the bark of cinnamon, pomegranates, oak, and cork-tree; and the roots of biſtort, tormentilla, and oſmund-royal.

ASTROGNOSIA, the ſcience of the fixed ſtars, or the knowledge of their names, conſtellations, magnitudes, &c.

ASTROITES, or STAR-STONE, in natural hiſtory, is ſo called on account of its reſemblance to a ſtar. It is controverted, among naturaliſts, whether they are parts of a petrified marine animal, or, as is more probable, a ſpecies of corals buried in the earth. The corals forming theſe ſtars are ſometimes round, ſometimes angular, and their columns are ſometimes ſeparated, and ſometimes the ſtriæ run into one another.

ASTROLABE, the name for a ſtereographic projection of the ſphere, either upon the plane of the equator, the eye being ſuppoſed to be in the pole of the world; or upon the plane of the meridian, when the eye is ſuppoſed in the point of interſection of the equinoctial and horizon.

The aſtrolabe is otherwiſe called a planiſphere. See the article PLANISPHERE.

ASTROLABE is alſo an inſtrument for taking the altitude of the ſun or ſtars at ſea, being a large braſs ring, A C B D (plate XXIII. fig. 4.) the limb of which, or a convenient part thereof A C, is divided into degrees and minutes, with a moveable index F G, which turns upon the center, and turns two ſights: at the zenith is a ring A, to hang it by in time of obſervation, when you need only turn the index to the ſun, that the rays may paſs freely through both ſights, and the edge of the index cuts the altitude upon the divided limb. This inſtrument, though not much in uſe now, if well made, and of great weight, that it may hang the ſteadier, is as good as moſt inſtruments that are uſed at ſea for taking altitudes, eſpecially between the tropics, when the ſun comes near the zenith, and in calm weather.

ASTROLABE, among the antients, was the ſame as our armillary ſphere. See the article ARMILLARY.

ASTROLOGICAL, ſomething belonging to aſtrology.

ASTROLOGY, a conjectural ſcience, which teaches to judge of the effects and influences of the ſtars, and to foretel future events by the ſituation and different aſpects of the heavenly bodies. It may be divided into two branches, natural and judiciary, the former being the prediction of natural effects, as the changes of weather, winds, ſtorms, hurricanes, thunder, floods, earthquakes, &c. and the latter that which pretends to foretel moral events, or ſuch as have a dependance on the freedom of the will.

Natural aſtrology belongs to phyſiology, of

Fig. 1. ASPHODEL.



Fig. 2. ASPLENIUM.



Fig. 3. ASTER, *STAR-WORT.*



Fig. 4. ASTROLABE.

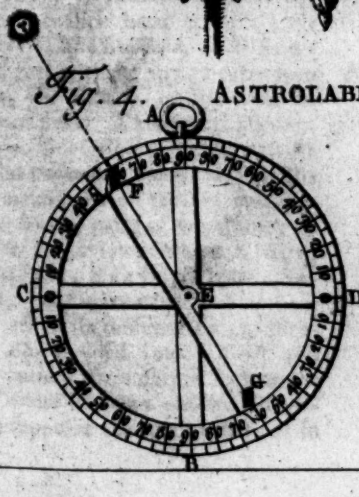


Fig. 5. ASTRANTIA.



T. Jefferys sculp.


BRITISH
MUSEUM

or natural philoſophy, and is only to be deduced *a poſteriori* from phænomena and obſervations. To this part Mr. Goad chiefly keeps, in his two books of aſtrology, in which he pretends that inundations, and an infinite number of phænomena of that kind, may be explained from the contemplation of the ſtars. For this aſtrology alſo, Mr. Boyle has a juſt apology in his hiſtory of the air. But as for judicial or judiciary aſtrology, with all the idle conceits about the horary reign of planets, the doctrine of horoſcopes, the diſtribution of the houſes, the calculation of nativities, fortunes, good or bad hours of buſineſs, and the like fatalities, they are mere levities, and may be plainly confuted by phyſical reaſons, and are therefore juſtly rejected by all ſound philoſophers.

ASTRONOMICAL, in a general ſenſe, ſomething relating to aſtronomy: thus we ſay, aſtronomical calendar, characters, hours, *&c.* See CALENDAR, HOUR, *&c.*

ASTRONOMICALS, a name ſometimes given to ſexageſimal fractions. See the article SEXAGESIMAL.

ASTRONOMY, that ſcience which treats of the heavenly bodies, explaining the motions, times, and cauſes of the motions, diſtances, magnitudes, gravities, light, *&c.* of the ſun, moon, and ſtars; the nature and cauſes of the eclipſes of the ſun and moon, the conjunction and oppoſition of the planets, and any other of their mutual aſpects, with the time when any of them did or will happen.

As the heavens may be conſidered either as they appear to the naked eye, or as they are diſcovered by the underſtanding; hence aſtronomy may be divided into two branches, ſpherical and theoretical. Spherical aſtronomy is the conſideration of the univerſe as it offers itſelf to our ſight; under which head come all the appearances of the heavens, ſuch as we perceive them, without any enquiry into the reaſon, the theory, or the truth of theſe appearances. Theoretical aſtronomy is the conſideration of the true ſtructure of the univerſe, accounting for the various phænomena of the heavenly bodies; the ſeveral parts of which may be ſeen under the articles SYSTEM, SUN, STAR, PLANET, EARTH, MOON, SATELLITE, and COMET.

With reſpect to its different ſtates, aſtronomy is alſo divided into antient and modern: antient aſtronomy is ſuch as the art ſtood under Ptolemy and his followers, who ſuppoſed the earth quieſcent in the center, and that all the heavenly bodies performed their revolutions round it. See the article PTOLEMAIC *Syſtem.* The modern or new aſtronomy is that which has been cultivated ſince the time of Copernicus, who revived Pythagoras and Philolaus's opinion of the motion of the earth, and laid the foundation of the true ſolar ſyſtem. See the article COPERNICAN *Syſtem.*

Among the moſt celebrated aſtronomical writers we may reckon Ptolemy, who has preſerved the obſervations of the antients, Albategnius, who has given the obſervations of the Saracens, Sacro Boſco, Copernicus, Tycho Brahe, Clavius, Kepler, Galilæo, Hevelius, Dr. Hook, Sir Jonas Moor, Mr. Huygens, Tacquet, Flamſtead, De la Hire, Gregory, Whiſton, Dr. Halley, Keill, the two Caſſinis, father and ſon, and the immortal Sir Iſaac Newton, to whom we are indebted for aſtoniſhing diſcoveries in this ſcience.

In painting, aſtronomy is repreſented like a woman, with a ſilver creſcent on her forehead, an azure mantle and a watchet ſcarf, beſprinkled with golden ſtars: or it may be repreſented by a lady in a ſtarry habit, looking towards heaven, and holding an aſtrolabe in her right hand, and a table of aſtronomical figures in her left.

ASTROP-WELLS, in Northamptonſhire, were recommended formerly by the phyſicians Willis and Clever, for the cure of the ſcurvy, aſthma, *&c.*

ASTROSCOPE, an inſtrument compoſed of two cones, having the conſtellations delineated on their ſurfaces, whereby the ſtars may be eaſily known.

ASTRUM, a conſtellation. See the article CONSTELLATION.

ASTURIA, a maritime province of Spain, lying along the bay of Biſcay, with Gallicia on the weſt, and Biſcay on the eaſt. It gives the title of prince to the eldeſt ſon of Spain.

ASYLUM, a ſanctuary, or place of refuge, where criminals ſhelter themſelves from the hands of juſtice. It is pretended that the firſt aſylum was built at Athens by the Heraclidæ, as a refuge for thoſe who fled from the oppreſſion of their fathers. Be that as it will, it is certain that the aſſyla of altars and temples were very antient, and likewiſe thoſe of tombs, ſtatues, and other monuments of conſiderable perſonages: thus the temple of Diana at Epheſus was a refuge for debtors, the tomb of Theſeus, for ſlaves; and Romulus, when he built Rome, left a certain ſpace as an aſylum to all perſons, whether

whether freemen or ſlaves, with a political view of drawing together great numbers from all quarters to people his new city. The Jews had their aſyla, the moſt remarkable of which were the ſix cities of refuge, the temple, and the altar of burnt offerings. This privilege began likewiſe to be enjoyed by the chriſtian churches in the reign of Conſtantine, at which time the altar only and the inward fabric of the church were a place of refuge; but afterwards the whole precincts, nay even the graves of the dead, croſſes, ſchools, &c. were comprehended in that privilege. As aſyla were not intended originally to patronize wickedneſs, but as a refuge for the innocent, the injured and the oppreſſed, ſeveral crimes were excepted by law, for which the church could grant no protection; as 1. Protection was denied to public debtors. 2. To Jews who pretended to turn chriſtians, in order to avoid ſuffering legal puniſhment for their crimes. 3. To heretics and apoſtates. 4. To ſlaves who fled from their maſters. And, 5. To robbers, murderers, conſpirators, raviſhers, &c.

Modern ſanctuaries are a great abuſe of thoſe antient aſyla of the chriſtian church, in giving protection to almoſt all ſorts of criminals, and ſo enervating the force of civil laws. The canon law of Gratian and the decretals of the popes, grant protection to almoſt all criminals; and Polydore Virgil cenſures the Engliſh, who did not even exempt traytors and rebels from flying to aſyla: but at preſent we have no ſuch practice, nor is there any privigleed place in England allowed by law to ſcreen offenders from juſtice.

ASYMMETRY, in a general ſenſe, the want of proportion between the parts of any thing, being the contrary of ſymmetry. See the article SYMMETRY.

In mathematics it is uſed for what is more commonly called incommenſurability. See INCOMMENSURABLE.

ASYMPTOTE, in geometry, a line which continually approaches nearer to another, but, though continued infinitely, will never meet with it: of theſe there are many kinds. In ſtrictneſs, however,

The term aſymptotes is appropriated to right lines, which approach nearer and nearer to ſome curve, of which they are ſaid to be the aſymptotes; but if they and their curve are indefinitely continued they will never meet.

The nature of an aſymptote will be eaſily conceived, from conſidering the aſymptot of the conchoid: for if C D E (plate XXIV. fig. 1. n° 1.) be a part of the curve of a conchoid, and A its pole, and the right line M N be ſo drawn that the parts B C, G D, F E of right lines drawn from the pole A be equal to each other, then the line M N will be the aſymptote of the curve, becauſe the perpendicular D p is ſhorter than B C, and E P ſhorter than D p, and ſo on; and the points E and p can never coincide.

Aſymptotes of the hyperbola are thus deſcribed. If C P (ibid. n° 2.) be a diameter of the hyberbola R A S, and C D be the ſemiconjugate of it; and if the line F E be a tangent in the point A, and A E = F A = C D; then, if the lines C G, C G, be drawn from the center C, through the points E and F, theſe lines C G, C G, will be the aſymptotes of the hyperbola R A S. And if any right line L M be drawn parallel to the tangent F E, ſo as to cut the curve and the aſymptotes, then will the parts L l, M m, be equal, and $L l \times M l = \overline{AE^2}$; and moreover, any annulus or ring made by M m or L l, when the whole figure revolves about the diameter A P, will always be equal to a circle, whoſe diameter is A E.

Again, if one of the aſymptotes be continued out to T (ibid. n° 3.) and the line T S R be drawn parallel to the diameter C Q, then $TR \times SR = \overline{AC^2}$, and if the line P M be any where drawn parallel to the aſymptote C S, then C P × P M will be always of the ſame magnitude, that is, always a ſtanding quantity.

The inveſtigation of right-lined aſymptotes may be found for curves of any order, without having recourſe to ſerieſes, by means of the general equation of that order, thus: Let the equation be $Ay^2 + Bxy + Cx^2 + Dy + Ex + F = 0$. Suppoſe $y = ax + b + cx^{-1}$, &c. then will $Aa^2 + Ba + C = 0$; and by extracting the roots of this laſt equation, we ſhall have a; and b will be $= -\frac{Da + E}{2aA + B}$, and $c = \frac{Ab^2 + Db + F}{2Aa + B}$; and if the equation be $Ay^3 + Bxy^2 + Cx^2y + Dx^3 + Ey^2 + Fxy + Gx^2 + Hy + Kx + L = 0$, the roots of this equation $Aa^3 + Ba^2 + Ca + D = 0$, will give a; and b will be $= \frac{Aa^2 + Ba + C}{3Ea^2 + 2Fa + G}$ and $c = \frac{-3Ab^2 + Bb^2 + Eab + Fb + Ha + K}{3Aa^2 + 2Ba + C}$ where

where *a* is the inclination of the aſymptote to the abſciſs, *b* is the diſtance between the beginning of the abſciſs and the point in which the aſymptote cuts the ſame, and *c* ſhews on which ſide of the aſymptotes the legs of the curve lie.

Concerning aſymptotes and aſymptotical curves, it may be remarked, 1. That although ſuch curves as have aſymptotes, are of the number of thoſe which do not include a ſpace; yet it is not true, on the other hand, that wherever we have a curve of that nature, we have an aſymptote alſo. 2. Of theſe curves that have an aſymptote, ſome have only one, as the conchoid, ciſſoid, and logarithmic curve; and others two, as the hyperbola. See HYPERBOLA, CONCHOID, &c. 3. As a right line and a curve may be aſymptotical to one another, ſo alſo may curves and curves: ſuch are two parabolas, whoſe axes are in the ſame right line. See the article PARABOLA. 4. No right line can ever be an aſymptote to a curve that is every where concave to that right line. 5. But a right line may be an aſymptote to a mixed curve, that is partly concave, and partly convex, towards the ſame line. And, 6. All curves that have one and the ſame common aſymptote, are alſo aſymptotical to one another.

ASYMPTOTIC, ſomething relating to aſymptotes. See the preceding article.

ASYMPTOTIC SPACE, the ſame with hyperbolic ſpace. See HYPERBOLIC.

ASYNDETON, in grammar, a figure which omits the conjunctions in a ſentence: as in that verſe of Virgil,

Ferte citi flammas, date vela, impellite remos.

Aſyndeton ſtands oppoſed to polyſyndeton. See the article POLYSYNDETON.

ATARAXY, a term uſed by the ſtoics and ſceptics, to denote that calmneſs of mind which ſecures us from all emotions ariſing from vanity or ſelf-conceit. In this conſiſted the *ſummum bonum*, or ſovereign good.

ATAXY, in a general ſenſe, the want of order: with phyſicians it ſignifies the irregularity of criſes and paroxyſms of fevers.

ATCHIEVEMENT, in heraldry, denotes the arms of a perſon, or family, together with all the exterior ornaments of the ſhield, as helmet, mantle, creſt, ſcrolls, and motto, together with ſuch quarterings as may have been acquired by alliances, all marſhalled in order.

ATELLANÆ, in roman antiquity, comic and ſatyric pieces preſented on the theatre; but as in the latter times they grew exceſſively lewd, they were ſuppreſſed by order of the ſenate.

ATHAMADULET, the prime miniſter of the perſian empire, as the grand viſier is of the turkiſh empire.

The athamadulet is great chancellor of the kingdom, preſident of the council, ſuperintendant of the finances, and is charged with all foreign affairs.

ATHAMANTA, in botany, a genus of the *pentandria digynia* claſs of plants, the general corolla whereof is uniform; the partial one conſiſts of five inflexocordated unequal petals: there is no pericarpium; the fruit is ovato-oblong, ſtriated, and diviſible into two parts: the ſeeds are two, oval, ſtriated, and convex on the one ſide, and plane on the other.

The root of this plant is the only part uſed in medicine. It is hot, dry, carminative, expelling wind, and of uſe in the colic and gripes. It is alſo alexipharmic, and good againſt peſtilential diſtempers, being an ingredient in the theriaca and mithridate. It is good againſt the ſtone, and for ſtoppages of urine.

ATHANASIAN CREED, that ſuppoſed to be compoſed by Athanaſius. See CREED.

ATHANATI, in perſian antiquity, a body of cavalry, conſiſting of ten thouſand men, always complete. They were called athanati becauſe when one of them happened to die, another was immediately appointed to ſucceed him.

ATHANOR, in chemiſtry, a kind of fixed and large digeſting furnace, made with a tower, ſo contrived as to keep a conſtant moderate heat for a conſiderable time, which may be increaſed or diminiſhed at pleaſure, by ſhutting the regiſters. It is alſo called *piger henricus*, ſlow harry, the philoſophical furnace, or furnace of arcana, ſometimes *uterus chemicus*, or *ſpagyricus*, and commonly the towered furnace. See FURNACE.

ATHEIST, ἄθεος, a perſon who denies the deity, who does not believe the exiſtence of a God, nor a providence, and who has no religion at all, either true or falſe.

An atheiſt, in general, is one who owns no being ſuperior to nature; in which ſenſe Spinoza may be ſaid to be an atheiſt, as he allows no other god beſides nature, or the univerſe, as it conſiſts of men and other ſenſible beings. See GOD.

Plato diſtinguiſhes three ſorts of atheiſts; firſt,

firſt, ſuch as abſolutely deny the exiſtence of any gods; ſecondly, thoſe who allow the exiſtence of gods, but deny their taking any concern in human affairs, and ſo diſbelieve a providence; thirdly, ſuch as believe there are gods, but think that they are eaſily appeaſed, and remit the greateſt crimes for a little prayer, or the like.

Some diſtinguiſh ſpeculative atheiſts, or thoſe who are ſo from principle and theory, from practical atheiſts, whoſe wicked lives incline them to believe, or rather to wiſh, that there were no God.

ATHELING, ADELING, EDLING, ETHLING, or ETHELING, among our ſaxon anceſtors, was a title of honour properly belonging to the heir apparent, or preſumptive, to the crown. This honourable appellation was firſt conferred by king Edward the confeſſor, on Edgar, to whom he was great-uncle, when, being without any iſſue of his own, he intended to make him his heir.

ATHENÆA, *ἀθηναια*, in grecian antiquity, the ſame with panathenæa. See the article PANATHENÆA.

ATHENÆUM, in antiquity, a public place wherein the profeſſors of the liberal arts held their aſſemblies, the rhetoricians declaimed, and the poets rehearſed their performances.

Theſe places, of which there were a great number at Athens, were built in the manner of amphitheatres, encompaſſed with ſeats called *cunei*. The three moſt celebrated athenæa were thoſe at Athens, at Rome, and at Lyons, the ſecond of which was built by the emperor Adrian.

ATHENREE, a town of Ireland, in the county of Galway, and province of Connaught, ſituated about ten miles eaſtward of the city of Galway, in 8° 50′ weſt longitude, and 53° 14′ north lat.

ATHENS, an antient city of Greece, and capital of the province of Livadia, called by the Turks Setines.

It is ſituated in a large plain near the river Iliſſus, about forty miles eaſt of the iſthmus of Corinth, in 24° 15′ eaſt long. and 38° north latitude, and is ſtill four miles in circumference.

ATHEROMA, in medicine, a tumour without pain or diſcolouring of the ſkin, containing in a membranaceous bag, matter like pap, intermixed with hard and ſtony corpuſcles, *&c.*

An atheroma is oblong, hard, not eaſily impreſſed by the fingers, nor after the impreſſion eaſy to reſtore itſelf. It is near akin to the meliceres and ſteatomas, and, like them, is cured by ſection. See the articles CYST and *Encyſted* TUMOURS.

ATHERTON, a town of Warwickſhire, ſituated about ten miles north of Coventry, in 1° 30′ weſt longitude, and 52° 40′ north latitude.

ATHLETÆ, in antiquity, men of remarkable ſtrength and agility, diſciplined to perform in the public games. This was a general term, under which were comprehended wreſtlers, boxers, runners, leapers, throwers of the diſk, and thoſe who practiſed in other exerciſes exhibited in the olympic, pythian, and other ſolemn ſports, wherein there were prizes allotted for the conquerors. From the five uſual exerciſes, the athletæ were alſo denominated *πενταθλοι*, and by the Latins *quinquertiones*.

ATHLETIC, ſomething belonging to the athletæ: thus, we ſay, athletic crown, athletic diet, athletic habit, *&c.* See the article CROWN, *&c.*

ATHLONE, a ſtrong town in the county of Weſtmeath, in the province of Connaught in Ireland, ſituated on the river Shannon, about ſixty miles weſt of Dublin, in 8° 5′ weſt longitude, and 53° 20′ north latitude.

ATHOL, a diſtrict of Perthſhire in Scotland, from whence the antient and noble family of Murray takes the title of duke.

ATHOS, a mountain of Macedon, in Greece, called by the natives Agios Oros, and by the Italians Monte Santo.

ATHY, a town of Ireland, in the county of Kildare and province of Leinſter, ſituated on the river Barrow, about ten miles ſouth of Kildare, in 7° 5′ weſt longitude, and 53° north latitude.

ATINGA-GUACU-MUCU, in ornithology, a beautiful braſilian bird, of the *ſturnus* or ſtarling-kind. See plate XXIV. fig. 2, and the article STARLING.

ATLANTIC OCEAN, that bounded by Europe and Africa on the eaſt, and by America on the weſt.

ATLANTIDES, in aſtronomy, the ſame with pleiades.

ATLAS, the name of a ridge of mountains, running from eaſt to weſt through the north of Africa, from whence the Atlantic ocean took its name.

ATLAS, in architecture, the ſame with telamon. See the article TELAMON.

ATLAS, in anatomy, the name by which ſome call the firſt vertebra of the neck; ſo called in alluſion to mount Atlas.

ATLAS, in matters of literature, denotes a book of univerſal geography, containing

ing maps of all the known parts of the world.

ATMOSPHERE, in phyſiology, the vaſt collection of air with which the earth is ſurrounded for a conſiderable height. See the article AIR.

The reaſon why this body of air is ſo tranſparent as to be inviſible, is owing to the great poroſity thereof; the pores and interſtices of air being ſo very great and large, it admits the light not only in right lines, but in ſuch great and plentiful rays, that the brightneſs and univerſal luſtre thereof not only renders the air diaphanous, but entirely hinders the opacity of the very ſmall particles of air from being at all ſeen; and therefore the whole body of air muſt conſequently be inviſible. See the article OPACITY.

The atmoſphere is not only admirably fitted for the reſpiration and nouriſhment of animals, for the growth of vegetables, the production and propagation of ſounds, &c. but helps alſo to make our habitable earth that beautiful ſcene of variety which it now is. If it were not for the atmoſphere, the ſun and ſtars would give us no light, but juſt when we turn our eyes upon them: the brightneſs of the ſun would indeed be greater than it is; but, if we turned our eyes from him towards any other part of the heaven, it would appear as dark and full of ſtars as in a bright ſtar-light in winter. As for the various bodies, which are upon the earth, they would all, without the atmoſphere, appear to us as dark as at midnight, except only thoſe parts of them which happened to be in ſuch a poſition, that the rays of the ſun, falling upon them, were reflected to our eyes. It is eaſy to imagine how much of the beauty of the viſible creation would be loſt in theſe circumſtances, beſides the inſupportable prejudice to the eyes of all creatures, by paſſing ſo ſuddenly from pitchy darkneſs to exceſſive light. The numberleſs ſmall particles of various kinds, which float in the air, receive the light from the ſun, and like ſo many ſmall ſpecula or looking-glaſſes, reflect and ſcatter it through the air, and this occaſions that light which we ſee in the day-time, by which our eyes are affected ſo ſtrongly, as to render the fainter light of the ſtars inſenſible. By this means the ſtars are illuminated all round us by the ſun, not only whilſt he is above our horizon, but alſo for ſome time before his riſing, and after his ſetting, ſo long as any of his rays can either directly, or by refraction, reach any part of the atmoſphere within our viſible horizon; for the air, as well as all other mediums which tranſmit light, refracts or bends the rays of it, if they come into it from a different medium. This property of the air is exceedingly beneficial to the inhabitants of the earth, as it lengthens the days by the addition of the twilight; but it gives aſtronomers ſome trouble, as it changes a little the places of all the heavenly bodies, and makes them appear higher than they really are, and muſt therefore be taken into the account, if we would be exact. The antients were not well acquainted with the refraction of the air, which renders many of their obſervations of the heavenly bodies, eſpecially near the horizon, liable to uncertainty. See the articles LIGHT, REFLECTION, REFRACTION, TWILIGHT, STAR, &c.

Height of the ATMOSPHERE. If the air were of an equal denſity throughout, the height of the atmoſphere might be determined: for it appears from experiments, that a column of air 72 feet high is equal in weight to one inch of water of the ſame baſe; ſo that the denſity of air is to that of water as 1 to 864. It has alſo been found by experiment, that the weight of a column of air, reaching to the height of the atmoſphere, will be equal to the weight of a column of water of the ſame baſe, and 32 feet, or 384 inches high. Hence 864×384 gives 331776 inches, or ſomewhat more than five miles for the height of the atmoſphere, were the denſity of the air every where the ſame as at the earth. But ſince its denſity decreaſes with the preſſure, it will be more rarefied and expanded the higher we go; by which means the height of the atmoſphere becomes indefinite, and terminates in pure æther. See ÆTHER.

However, though it is impoſſible to aſſign the real height of the atmoſphere, it nevertheleſs appears certain from experiments, that 45 or 50 miles is the utmoſt height where the denſity is ſufficient to refract a ray of light; and, therefore, that may be accounted the altitude of the atmoſphere, to the leaſt ſenſible degree of denſity.

Weight of the ATMOSPHERE. It has been already obſerved, under the article AIR, that the atmoſphere is a perfect chaos of different effluvia, conſiſting of almoſt all kinds of corpuſcles, confuſedly jumbled together, and conſtituting one maſs:

water, fire, volatile ſalts, oils, &c. are there blended together, in different proportions. Hence it is no wonder that the gravity of the atmoſphere ſhould vary, according as the more light or more ponderous of theſe conſtituent parts prevail in it: and, in fact, it is found ſometimes to ſuſtain a pillar of mercury 31 inches high, in the barometer; when, at others, it will raiſe the mercury, but to the height of 28 inches. Taking therefore 29 ½ inches for the mean altitude of the mercury, a column of it, whoſe baſe is one ſquare inch, weighs about 15 pounds, which is equal to the preſſure of the air upon every ſquare inch. Hence, ſuppoſing the ſurface of a man's body to be 14 ½ ſquare feet, the preſſure of the air ſuſtained by him will be 31320 pounds, or nearly 14 tons, at a medium: whereas, when the air is lighteſt, it will be only 13 $\frac{1}{5}$ tons; and when heavieſt, 14 $\frac{3}{10}$ tons, the difference of which is 1 $\frac{1}{10}$ ton, = 2464 pounds, wherewith we are compreſſed more at one time than at another.

This great difference of preſſure muſt greatly affect us, in regard to the animal functions, and conſequently with reſpect to health. If a perſon, for inſtance, be aſthmatical, he will find his diſorder increaſe with the levity of the air. Again, the reaſon why we think the air lighteſt in fine weather, when it is really heavieſt, is becauſe the greater preſſure conſtringes the fibres and nerves, and thereby makes them more vigorous than ordinary: whereas, on the contrary, when this preſſure is leſſened by near 2500 lb the fibres are relaxed, and a gloomy inactivity and heavineſs enſues.

Since the air, ſays ſir Iſaac Newton, is compreſſed by the weight of the incumbent atmoſphere, and the denſity of the air is proportionable to the force compreſſing it, it follows, by computation, that at the height of about 7 engliſh miles from the earth, the air is four times rarer than at the ſurface; and at the height of 14 miles, it is 16 times rarer than at the ſurface; and at the height of 21, 28, or 35 miles, it is reſpectively 64, 256, or 1024 times rarer; and at the height of 70, 140, and 210 miles, it is about 1000000, 1000000000000, or 1000000000000000000 times rarer; and ſo on in a geometrical proportion of rarity, compared with the arithmetical proportion of its height.

The weight of the atmoſphere, which preſſes upon every body, being equal to ſo many fifteen pounds, as the ſurface of the body contains ſquare inches, the reaſon may be aſked, why men, beaſts, houſes, &c. are not cruſhed to pieces by ſuch a prodigious weight of air? This is owing to the equilibrium of the internal air, or the air included in all bodies, which though it be ſmall, can, by its reaction, counterpoiſe and reſiſt the preſſure of the external air, how great ſoever it be, as is proved by ſeveral experiments upon the air pump, already mentioned under the article AIR. See alſo the articles ACTION and REACTION.

If it be required to find the weight of the whole atmoſphere upon the earth's ſurface, we may proceed thus: ſuppoſe the earth's diameter in round numbers 8000 miles, the area of a great circle will be 8000 × 8000 × 0.7854 = 50266400 ſquare miles, which multiplied by 4 gives 201065600 ſquare miles for the ſurface of the earth; but, becauſe we took the diameter a little too large, we may take 200,000,000 for the number of ſquare miles in the earth's ſurface; in one ſquare mile are (5280 × 5280 =) 27878400 ſquare feet, therefore, on the earth's ſurface we have 5575680000000000 ſquare feet, which multiplied by 2660 (the preſſure on each ſquare foot) gives 14831308800000000000 pounds troy for the whole preſſure.

For meaſuring the different degrees of heat, weight, and moiſture of the atmoſphere, inſtruments have been invented. See the articles THERMOMETER, BAROMETER, and HYGROMETER.

ATMOSPHERE *of the moon*. See MOON.

ATMOSPHERE *of the ſun*. See SUN.

ATOLLENS OCULI, in anatomy, the ſame with *elevator*. See ELEVATOR.

ATOM, ἄτομος, in philoſophy, a particle of matter, ſo minute as to admit of no diviſion.

Atoms are the *minima naturæ*, and are conceived as the firſt principles or component parts of all phyſical magnitude. However, atoms are not accounted indiviſible on account of their want of extenſion (for they have the three dimenſions of phyſical magnitude) but they are conceived indiviſible on account of their ſolidity, hardneſs, and impenetrability, which leave no vacancy for the admiſſion of any foreign force, to ſeparate and diſunite them, and conſequently exclude a diviſion. Thus it is neceſſary they ſhould be indiſſolvible, in order to their being incorruptible, which quality they muſt

muſt be poſſeſſed of, as being the pre-exiſtent matter of which bodies were made. Sir Iſaac Newton adds, that it is required they ſhould be immutable, in order to the world's continuing in the ſame ſtate, and bodies being of the ſame nature now as formerly; from which conſiderations the antients were led to aſſert the eternity of atoms, as whatever is immutable, muſt be eternal.

The antients went farther in the doctrine of atoms: they aſcribed gravity to them; and, in conſequence, maintained, that they were endued with motion: and farther obſerving, that their falling perpendicularly could not join or unite together, they ſuperadded a fortuitous motion ſideways, and provided them with certain hooked parts, to enable them the better to hang together, whence, from a caſual jumble of theſe hooked atoms, they ſuppoſed the univerſe to have been formed: Hence,

ATOMICAL philoſophy, or the doctrine of atoms, a ſyſtem which, from the hypotheſis, that atoms are endued with gravity and motion, accounted for the origin and formation of all things. This philoſophy was firſt broached by Moſchus, ſometime before the trojan war, but was much cultivated and improved by Epicurus, whence it is denominated the epicurean philoſophy. See the article EPICUREAN PHILOSOPHY.

ATONEMENT, the ſame with expiation. See the article EXPIATION.

ATONICS, in grammar, words not accented. See the article ACCENT.

ATONY, ἀτονία, in medicine, a defect of tone or tenſion, or a laxity or debility of the ſolids of the body, occaſioning faintings, weakneſſes, &c. Some phyſicians aſcribe the cauſes of all diſtempers to relaxation, ſtricture, or a mixture of theſe.

ATRA BILIS, in antient medicine, the black bile, one of the humours of the antient phyſicians; which the moderns call melancholy. See the articles MELANCHOLY and HUMOUR.

ATRACTYLIS, in botany, a genus of the *ſyngeneſia-polygamia* claſs of plants, with radiated flowers, and compreſſed ſeeds, coronated with a plumoſe down, and ſtanding on a plane villoſe receptacle.

ATRAGENE, in botany, a genus of the *polyandria-polygynia* claſs of plants, the flower of which conſiſts of twelve petals, and its ſeeds are caudated.

ATRAPHAXIS, in botany, a genus of the *hexandria-digynia* claſs of plants, the flower of which conſiſts of two roundiſh, ſinuated and permanent petals; and its cup encloſes a ſingle, roundiſh, and compreſſed ſeed. Dilennius reckons it only a ſpecies of *atriplex*.

ATRI, a town of the farther Abruzzo, in the kingdom of Naples, ſituated in 15° 20′ eaſt longitude, and 42° 40′ north latitude.

ATRIPLEX, ORACH, in botany, a genus of the *polygamia-monoecia* claſs of plants, without any flower petals: the cup of the female flower is compoſed of two leaves, incloſing a ſingle and compreſſed ſeed: whereas that of the hermaphrodite flower is compoſed of five leaves, and encloſes a ſingle, roundiſh, and depreſſed ſeed.

Atriplex is eſteemed cooling and emollient; and its ſeeds, given internally, diuretic, and good in diſorders of the uterus.

ATRIUM, or PORCH. See PORCH.

ATROPA, in botany, a genus of the *pentandria-monogynia* claſs of plants, the flower of which conſiſts of a ſingle funnel-faſhioned petal, the fruit is a globoſe berry, containing two cells, wherein the ſeeds incloſed are numerous and kidney-ſhaped.

ATROPHY, ἀτροφία, in medicine, a diſeaſe, wherein the body, or ſome of its parts, do not receive the neceſſary nutriment, but waſte and decay inceſſantly. This is a diſorder proceeding from the whole habit of the body, and not from any diſtemper of the entrails: it is attended with no remarkable fever, and is natural in old age, which atrophy is called *atrophia ſenilis*.

Atrophy is either nervous, or the effect of immoderate evacuations. A nervous atrophy is that which owes its beginning to a bad and morbid ſtate of the ſpirits, or to the weakneſs or deſtruction of the tone of the nerves; whence a weakneſs and an univerſal conſumption of the body proceeds, for want of a due aſſimilation of the nutricious juice: ſo that from the original of the diſeaſe, there is a defect of appetite, and a bad digeſtion in the ſtomach, ariſing from an imperfect elaboration and volatilization of the chyle.

An atrophy from inanition proceeds from a preternatural defect or ſubtraction of the nutricious juice, which varies according to the different outlets of the body, whether by nature or by art. See the article CONSUMPTION.

ATTACHING, or ATTACHMENT, in law, the taking or apprehending of a perſon, by virtue of a writ or precept.

It is diſtinguiſhed from an arreſt in this reſpect, that whereas an arreſt lies only on the body of a man, an attachment is oftentimes on the goods only, and ſometimes on the body and goods; there is this farther difference, than an arreſt proceeds out of an inferior court by precept only, and an attachment out of a higher court, either by precept or writ.

An attachment by writ differs from diſtreſs, inſomuch that an attachment does not extend to lands, as a diſtreſs does; and a diſtreſs does not touch the body, as an attachment does.

In the common acceptation, an attachment is the apprehenſion of a man's body, to bring him to anſwer the action of the plaintiff.

ATTACHMENT *out of the chancery* is obtained upon an affidavit made, that the defendant was ſerved with a ſubpœna, and made no appearance; or it iſſueth upon not performing ſome order or decree. Upon the return of this attachment by the ſheriff, *quod non eſt inventus in balliva ſua*, another attachment, with a proclamation, iſſues; and if he appears not thereupon, a commiſſion of rebellion.

ATTACHMENT *out of the foreſt*, is one of the three courts held in the foreſt. The loweſt court is called the court of attachment, or wood-mote court; the mean, ſwan-mote; and the higheſt, the juſtice in eyre's ſeat.

This attachment is by three means, by goods and chattles, by body, pledges, and mainprize, or the body only. This court is held every forty days throughout the year, whence it is called forty-days court.

ATTACHMENT *of privilege*, is by virtue of a man's privilege to call another to that court whereto he himſelf belongs, and in reſpect whereof he is privileged to anſwer ſome action.

Foreign ATTACHMENT, is an attachment of money or goods, found within a liberty or city, to ſatisfy ſome creditor within ſuch liberty or city.

By the cuſtom of London, and ſeveral other places, a man can attach money or goods in the hands of a ſtranger, to ſatisfy himſelf.

ATTACHIAMENTA *bonorum*, in our old ſtatute books, imports a diſtreſs taken upon the goods or chattles of a perſon ſued for a perſonal eſtate, or debt, by the legal attachiators, or bailiffs, as a ſecurity to anſwer the action.

ATTACHIAMENTA *de ſpinis & boſco*, denotes an antient privilege granted to the officers of foreſts, to take to their own uſe thorns, bruſh, and windfalls within their own precincts or liberties.

ATTACK, a violent attempt upon any perſon or thing, an aſſault, or the act of beginning a combat, or diſpute.

ATTACK, in the military art, is an effort made to force a poſt, break a body of troops, *&c.* See the article ASSAULT.

ATTACK *of a ſiege*, is a furious aſſault made by the beſiegers with trenches, covers, mines, *&c.* in order to make themſelves maſters of a fortreſs, by ſtorming one of its ſides. If there are two or three attacks made at the ſame time, there ſhould be a communication betwixt them.

Falſe ATTACKS are never carried on with that vigor and briſkneſs that the other is; the deſign of them being to favour the true attack, by amuſing the enemy, obliging the garriſon to a greater duty in dividing their forces, that the true attack may be more ſucceſsful.

To ATTACK *in flank*, is to attack both ſides of the baſtion.

ATTAINDER, in law, is when a man has committed felony or treaſon, and ſentence is paſſed upon him for the ſame. The children of a perſon attainted of treaſon, are, thereby, rendered incapable of being heirs to him, or to any other anceſtor; and if he were noble before, his poſterity are degraded, and made baſe: nor can this corruption of blood be ſalved, but by an act of parliament, unleſs the ſentence be reverſed by a writ of error.

Attainder is twofold, either by appearance, or by proceſs.

ATTAINDER by appearance, is either by battle, by confeſſion, or by verdict. By battle, is when the party appealed by another, chooſing rather to try the truth by combat than by jury, is vanquiſhed. Attainder by confeſſion, is either by pleading guilty at the bar, and not putting himſelf upon trial by the jury, or before the coroner in ſanctuary, where, in antient times, he was obliged to renounce the realm. Attainder by verdict, is when the priſoner at the bar pleads not guilty to the indictment, and is pronounced guilty by the jury.

ATTAINDER by proceſs, otherwiſe called attainder by default, is where a party flies,

flies, or does not appear, after being three times publicly called in the county court, and at laſt upon his default, is pronounced guilty.

Bill of ATTAINDER, a bill brought into parliament, for attainting, condemning, and executing a perſon for high treaſon.

ATTAINT, in law, *attincta*, a writ which lies againſt a jury that have given a falſe verdict in any court of record, in a real or perſonal action, where the debt or damages amount to above forty ſhillings.

If the verdict be found falſe, the judgment by common law was, that the jurors meadows ſhould be ploughed up, their houſes broken down, their woods grubbed up, all their lands and tenements forfeited, *&c.* but by ſtatute the ſeverity of the common law is mitigated, where a petty jury is attainted, and there is a pecuniary penalty appointed.

But if the verdict be affirmed, ſuch plaintiff ſhall be impriſoned and fined.

ATTAINT, among farriers, a knock, or hurt in a horſe's leg, proceeding either from a blow with another horſe's foot, or from an over-reach in froſty weather, when a horſe being rough-ſhod, or having ſhoes with long calkers, ſtrikes his hinder feet againſt his fore-leg.

ATTAINTED, ATTAINTUS, or ATTINCTUS, in law, is applied to a perſon's being found guilty of any crime or offence, eſpecially treaſon or felony, by due courſe of law.

ATTENDANT, or ATTENDENT, in the general acceptation. See the articles ASSISTANT, RETINUE, and SATELLITES.

ATTENDANT, ATTENDENS, in law, one that owes duty or ſervice to another, or in ſome manner depends upon him, as a widow endowed of lands by a guardian, ſhall be attendant upon him.

ATTENTION, *attentio*, the applying the ear or the mind aſſiduouſly to any thing ſaid or done, in order to acquire the knowledge thereof.

Attention of the mind is more properly an act of the will than of the underſtanding, wherewith the will ſummons the underſtanding from the conſideration of other objects, to the thing in hand.

Attention, in regard of hearing, is the ſtretching the membrana tympani, to make it more ſuſceptible of ſounds, or adjuſting the tenſion of that membrane to the proper key or tone of the ſound.

ATTENUANTS, in pharmacy, medicines which reſolve the viſcoſity of the humours in the human body; thereby promoting their circulation as well as the diſcharge of all noxious and excrementitious matter.

When theſe medicines act upon fluids lodged in the capillary veſſels, they get the appellation of aperitives, or aperients, as they do that of expectorants, when they promote a diſcharge of the viſcid humours in the lungs. See the articles APERIENTS and EXPECTORANTS.

Of the vegetable kingdom, the whole tribe of acrid and bitter plants, are attenuants; of the animal kingdom, the volatile ſalts, as ſal armoniac, and ſalt-petre; and of the mineral kingdom, the mineral acid ſalts, as vitriol, ſea-ſalt, glauber's ſalts, *&c.*

Attenuants are recommended in the inflammatory diſeaſes of winter, along with other medicines. See INFLAMMATORY.

ATTENUATION, the act of attenuating, or making a fluid more thin. See the article ATTENUANTS.

ATTESTATION, the act of affirming, or witneſſing, the truth of ſomething, more eſpecially in writing.

ATTIC, *atticus*, any thing relating to Attica, or to the city of Athens: thus, attic ſalt, *ſales attici*, in philology, is a delicate poignant ſort of wit and humour peculiar to the athenian writers; attic witneſs, *atticus teſtis*, a witneſs incapable of corruption, *&c.*

ATTIC, in architecture, a ſort of building wherein the roof or covering is not to be ſeen; thus named, becauſe the buildings at Athens were generally of this form.

ATTIC ORDER, a ſmall order raiſed upon a large one, by way of crowning, or to finiſh the building; or it is, according to ſome, a kind of rich pedeſtal, ſometimes uſed for the conveniency of having a wardrobe, or the like; and inſtead of columns, has only pilaſters of a particular form, and ſometimes no pilaſters at all. The name attic is alſo given to a whole ſtory into which this order enters; this little order being always found over another greater one.

ATTIC *of a roof*, a kind of parapet to a terras, platform, or the like.

ATTIC *continued*, that which encompaſſes the whole circumference of a building, without any interruption, following all the jets, the returns of the pavilions, *&c.*

ATTIC *interpoſed*, one ſituated between two

tall

tall ſtones, ſometimes adorned with columns or pilaſters.

ATTIC *baſe*, a peculiar kind of baſe uſed by the antient architects in the ionic order, and by Palladio, and ſome others, in the doric. This is the moſt beautiful of all baſes. See the article BASE.

ATTIRE, in botany, a name given by ſome to the generative parts of plants; uſed by others, to denote the third part or diviſion of the flower of a plant, the other two being the empalement and the foliation, or the cup and the flower petals.

ATTIRE, in hunting, ſignifies the head or horns of a deer. See the article HEAD.

The attire of a ſtag, if perfect, conſiſts of bur, pearls, beam, gutters, antler, ſur-antler, royal, ſur-royal, and croches; of a buck, of the bur, beam, brow-antler, advancer, palm, and ſpellers.

ATTITUDE, in painting and ſculpture, the geſture of a figure, or ſtatue; or it is ſuch a diſpoſition of their parts, as ſerves to expreſs the action and ſentiments of the perſon repreſented.

ATTLEBURY, a market town of Norfolk, about eighty miles north-eaſt of London, ſituated in 40′ eaſt longitude, and 52° 30′ north latitude.

ATTOCK, a city on the eaſtern frontiers of Perſia, capital of a province of the ſame name, and ſituated on the river Attock, in 72° eaſt longitude, and 33° north latitude.

ATTOLENS, in anatomy, an appellation given to ſeveral muſcles, otherwiſe called levators and elevators.

ATTORNATO FACIENDO, *&c.* a writ commanding a ſheriff, or ſteward, to admit an attorney to appear for a perſon who owes ſuit to the county court, court baron, *&c.*

ATTORNEY, in a general ſenſe, a perſon appointed by another to do ſomething in his ſtead.

ATTORNEY, at law, one who is retained to proſecute or defend a law-ſuit.

Attornies being properly thoſe who ſue out writs or proceſs, or commence, carry on, and defend actions, in any of the courts of common law, are diſtinguiſhed from ſolicitors, as the latter do the like buſineſs in the courts of equity; and none are admitted, either as attorney or ſolicitor, unleſs they have ſerved a clerkſhip of five years, been enrolled, and taken the oath in that caſe provided; and the judges of their reſpective courts are required to examine their ſeveral capacities.

By a late order of all the judges, all attornies are to be admitted of ſome inns of court, or chancery, (except houſe-keepers in London and Weſtminſter, *&c.*) and no attorney ſhall put himſelf out of that ſociety, into which he is admitted, till he is admitted to ſome other ſociety, and deliver a certificate thereof; and all attornies are to be in common at the times ordered by the ſociety to which they belong, otherwiſe ſhall be put out of the roll of attornies.

Attornies may be puniſhed for ill practices; and if an attorney, or his clerks, of which he muſt have but two at one time, do any thing againſt the expreſs rules of the court, he or they may be committed.

Neither a plaintiff or defendant may change his attorney without rule of court, whilſt the ſuit is depending; and attornies are not generally obliged to deliver up the writings in their hands, till their fees are ſatisfied: likewiſe, an action does not lie againſt an attorney, for what he adviſes in the way of his profeſſion: yet, if an attorney plead any plea, or appear without warrant from his client, action of the caſe lies againſt him.

Attornies have the privilege to ſue and be ſued only in the courts of Weſtminſter, where they practiſe; and they ſhall not be choſen into offices againſt their will.

ATTORNEY *of the dutchy of Lancaſter* is the ſecond officer in that court, and ſeems to be there, for his ſkill in the law, placed as aſſeſſor to the chancellor of the court.

ATTORNEY-GENERAL, is a great officer under the king, created by letters patent, whoſe office it is to exhibit informations, and proſecute for the crown in criminal cauſes; and to file the bills in the exchequer, for any thing concerning the king in inheritance or profits. To him come warrants for making of grants, pardons, *&c.*

Letter of ATTORNEY. See LETTER.

Warrant of ATTORNEY. See WARRANT.

ATTOURNMENT, or ATTORNMENT, in law, a tranſfer from one lord to another, of the homage and ſervice a tenant makes; or that acknowledgment of duty to a new lord.

Thus, when one is tenant for life, and he in reverſion grants his right to another, it

it is neceſſary the tenant for life agree thereto, which is called attournment, and without which, nothing can paſs by the grant. If the grant be by fine in court of record, the tenant ſhall be compelled to attourn.

ATTRACTION, *attractio*, in natural philoſophy, an indefinite term, applicable to all actions whereby bodies tend towards one another, whether in virtue of their weight, magnetiſm, electricity, impulſe, or any other latent power.

It is not therefore the cauſe determining the bodies to approach, that is expreſſed by the word attraction; but the effect, or approach itſelf.

That there are ſuch tendencies in the material world, is beyond all doubt, being obvious to the moſt inattentive obſerver; and it is no leſs evident, that many of the phænomena of nature are the reſult hereof.

Philoſophers generally reckon four different ſorts of attraction, *viz.* that of coheſion, of electricity, of magnetiſm, and gravitation.

Attraction of coheſion, is peculiar to the component particles of bodies, by virtue of which, they are firmly connected and held together. The laws and properties of this attraction are the following. 1. It is very diſcernible and moſt powerful in corpuſcles, or the ſmalleſt particles of matter. 2. It is mutually exerted between thoſe particles; or, they mutually attract, and are attracted by each other. 3. The ſphere of attraction, or extent of this power, is greater in ſome particles of matter than in others, but very ſmall at the outermoſt; for, 4. This power is inſenſible in ſolid bodies in the leaſt ſenſible diſtance, acting as it were only in contact; and, therefore, 5. It muſt be nearly proportional to the quantity of contiguous ſurfaces; or the parts of the bodies cohere moſt ſtrongly, whoſe touching ſurfaces are largeſt. 6. This power muſt decreaſe, as the ſquares of the diſtances increaſe; becauſe it muſt be ſuppoſed to iſſue from each particle in right-lined directions. 7. Where the ſphere of attraction ends, there a repelling power begins; by which the particles, inſtead of attracting, repel and fly from each other. 8. By this power, the ſmall portions or drops of a fluid, conform themſelves to a ſpherical figure.

The firſt and ſecond of theſe properties, are evident from various experiments; as the ſudden union of two contiguous drops of mercury, water, &c. the ſtrong adheſion of two leaden balls, which touch by poliſhed ſurfaces; as alſo of glaſs-planes, and cryſtal buttons, the aſcent of water between glaſs-planes, and in capillary tubes; the riſing of water by the ſides of a glaſs veſſel, and into tubes of ſand, aſhes, ſugar, ſponge, and all porous ſubſtances.

The third property is proved by the ſticking or adhering of water to ſubſtances, which by mercury are left dry. The fourth and fifth properties are evinced by the hyperbolic curve, formed by the ſuperficies of a fluid aſcending between glaſs-planes touching each other on one ſide. The ſixth property is evident. The ſeventh appears from the aſcent of ſteam, or vapour, from humid or fluid bodies; and the eighth property is manifeſt by drops of water falling on duſt.

From this account of the attraction of coheſion, we have a rational ſolution of ſeveral very curious and ſurpriſing phænomena; as why the parts of bodies adhere and ſtick ſo firmly together; why ſome are hard, others ſoft; ſome fixed, others fluid; ſome elaſtic, others void of elaſticity: all which ariſe from the different figures of the particles, and the greater or leſs degree of attraction conſequent thereupon. On this principle, we account for the manner in which plants imbibe the nutritive juices, by the fibres of the roots; alſo for the riſe of the ſap in vegetables, and for the whole oeconomy of vegetation. Hence the rationale of the various ſecretions of fluids by the glands, and their wonderful circulation through the fine capillary veſſels. Hence alſo the reaſon of ſoldering and gilding metals; alſo of melting, or fuſion, by heat. Hence alſo the exhalation of vapours by the heat of the ſun or fire; the aggregation of aqueous particles in the air, forming the drops of rain. We hence ſee the reaſon of diſtillation, filtration, diſſolution, digeſtion, ſublimation, precipitation, cryſtalization, and the other operations of chemiſtry and pharmacy. Laſtly, it is by this power of attraction and repulſion, that we are to account for thoſe wonderful phænomena of ſubterranean accenſions and exploſions; of vulcano's and earthquakes; of hot ſprings, damps, and ſuffocating exhalations in mines, &c. Attraction and repulſion differ in no other reſpects than this, that the attractive virtue, in the firſt caſe, carries bodies towards the attracting

body; and, in the latter, it carries them from it. In each caſe, the particles are moved in the ſame manner among themſelves by the attracting, electric, or magnetic power. See the articles COHESION and REPULSION.

The ſecond ſpecies of attraction, is that of electrical bodies, as glaſs, amber, ſealing-wax, jet, &c. for the properties of which, ſee ELECTRICITY.

For the properties of the third kind of attraction, ſee the article MAGNET.

The fourth kind of attraction, *viz.* that of gravitation, though reckoned a diſtinct ſpecies from that of coheſion; yet, when well conſidered, may be found perhaps to differ from it no otherwiſe than as a whole from the parts: for the gravity of large bodies may be only the reſult or aggregate of the particular powers of the conſtituent particles, which ſingly act only in contact, and in ſmall diſtances; but with their joint forces, in vaſt quantities, produce a mighty power, whoſe efficacy extends to very great diſtances, proportional to the magnitudes of the bodies.

This attractive force of gravity is, to ſenſe, the ſame for any diſtance near the ſurface of the earth; becauſe ſuch diſtance does not ſenſibly alter the diſtance from the center of the earth. But when the diſtance is ſo great as to bear a conſiderable proportion to the ſemi-diameter of the earth, then will the power of gravity decreaſe very ſenſibly: thus, at the diſtance of the moon, which is, at a medium, about ſixty ſemi-diameters of the earth, the power of gravity will be to that on the earth's ſurface, as 1 to 3600. See the articles GRAVITY, GRAVITATION, and CENTRAL FORCES.

As the attraction of coheſion is the cauſe of the ſolidity of ſmall bodies, ſo is the attraction of gravitation that chain, which being diffuſed over the ſolar ſyſtem, preſerves the planets in their orbits, and makes them revolve about the center of the ſyſtem. See SYSTEM.

That the attraction of gravitation and coheſion is the act of an immaterial cauſe, in virtue whereof inactive matter performs the offices for which it was deſigned; or that theſe diſpoſitions in bodies are not the reſult of any mechanical cauſe whatever; that is, ſuch as may ariſe from the effluvia of bodies, or the action of any other material ſubſtance, Mr. Rowning demonſtrates as follows: In the firſt place it is well known, that, if gravity acts upon bodies with the ſame degree of intenſeneſs, whether they be in motion or at reſt, it may be demonſtrated, that bodies, when projected, will deſcribe parabolas; and that, when vibrating in cycloids, their vibrations will be iſochronous, &c. In the next place, it is well known, that bodies, when projected, do deſcribe parabolas, and that, when vibrating in cycloids, their vibrations are iſochronous, &c. From which two properties it demonſtratively follows, that if gravity be the cauſe of the two abovementioned effects, it muſt act upon bodies with the ſame force, whether they be in motion or at reſt. Again, it is well known, that if attraction of coheſion acts upon rays of light with the ſame degree of intenſeneſs, whatever be the velocity they move with, it may be demonſtrated, that the ratio of the ſine of the angle of incidence to the ſine of the angle of refraction will be given. But in refraction of light, the ratio of theſe ſines is given in fact; if, therefore, attraction of coheſion be the cauſe of the refraction of light, it muſt act upon rays of light with the ſame intenſeneſs, whatever velocity they move with. See the articles LIGHT, REFRACTION, &c.

But no effluvia of bodies, no material ſubſtance, and, in ſhort, no material cauſe whatever, can act with the ſame intenſeneſs, or have the ſame effect upon a body in motion, as upon the ſame body at reſt; becauſe body can only act upon body, according to the ſum or difference of their motions. It remains therefore, that the two diſpoſitions herein mentioned are not the reſult of any material cauſe whatever. See the article MOTION.

Under the articles FLUID and CAPILLARY TUBES, may be ſeen how any fluid will aſcend above the common ſurface in capillary tubes, &c. by means of attraction; but the moſt notable and obvious motion of fluids, ariſing from attraction, is that of the tides; the theory of which we have explained at large under the article TIDES.

ATTRACTIVE, *attractivus, attractrix*, ſomething that has the power and property of attraction. See ATTRACTION.

ATTRACTIVE POWER, or FORCE, *vis attractiva*. See the articles POWER and ATTRACTION.

ATTRACTIVES, or ATTRACTIVE REMEDIES, medicines applied externally, that by their warmth and activity, penetrate the pores, mixing with, and rarefying all ob-

obſtructed matter, ſo as to fit it for diſcharge, upon laying open the part. Theſe are the ſame with what we call drawers, ripeners, maturants, and digeſtives.

The principal ſimples of this claſs are moſt kinds of fat, the dungs of pigeons and cows; bran, yeſt, herring, melilot, tobacco, oil, pitch, reſin, frankincenſe, &c. See the article SUPPURATIVES.

ATTRIBUTE, *attributum*, in a general ſenſe, that which agrees with ſome perſon or thing; or a quality determining ſomething to be after a certain manner. Thus, underſtanding is an attribute of mind, and extenſion an attribute of body.

That attribute which the mind conceives as the foundation of all the reſt, is called its eſſential attribute; thus, extenſion is by ſome, and ſolidity by others, eſteemed the eſſential attributes of body or matter.

ATTRIBUTES, in theology, the ſeveral qualities or perfections of the divine nature, or ſuch as we conceive to conſtitute the proper eſſence of God; as his wiſdom, power, juſtice, goodneſs, &c.

The heathen mythologiſts divided the deity into as many diſtinct beings as he had attributes. Thus his power was Jupiter; his abſolute will, Fate; his wrath and vengeance, Juno, &c.

ATTRIBUTES, in logic, are the predicates of any ſubject, or what may be affirmed or denied of any thing. See the article PREDICATE.

ATTRIBUTES, in painting and ſculpture, are ſymbols added to ſeveral figures, to intimate their particular office and character.

Thus the eagle is an attribute of Jupiter; a peacock, of Juno; a caduce, of Mercury; a club, of Hercules; and a palm, of Victory. For the attributes of the apoſtles. See the article APOSTLE.

ATTRITION, *attritio*, the rubbing or ſtriking of bodies one againſt another, ſo as to throw off ſome of their ſuperficial particles.

The grinding or poliſhing of bodies is performed by attrition, the effects of which are heat, light, fire, and electricity.

ATTRITION is alſo often uſed for the friction of ſuch ſimple bodies as do not wear from rubbing againſt one another, but whoſe fluids are, by that motion, ſubjected to ſome particular determination; as the various ſenſations of hunger, pain and pleaſure, are ſaid to be occaſioned by the attrition of the organs formed for ſuch impreſſions.

ATTRITION, among divines, ſignifies a ſorrow or repentance for having offended God, ariſing chiefly from the apprehenſions of puniſhment, the loſs of heaven, and the torments of hell; and differs from contrition, in as much as this laſt is conceived to ariſe from a love to God, as an ingredient or chief motive to our ſorrow and repentance. See the article CONTRITION.

AVA, a kingdom of India, beyond the Ganges, ſituated on the north-eaſt part of the bay of Bengal, between the countries of Arracan on the north, and Pegu on the ſouth.

AVALON, a town of Burgundy, in France, ſituated in 3° 50′ eaſt longitude, and 47° 25′ north latitude.

AVANT, a french term, contracted by us into van. See the article VAN.

AVAST, in the ſea language, a term requiring to ſtop, to hold, or to ſtay.

AVAUNCHERS, among hunters, the ſecond branches of a deer's horn. See the article HEAD.

AUBANE, in the cuſtoms of France, a right veſted in the king of being heir to a foreigner that dies within his dominions.

By this right, the French king claims the inheritance of all foreigners that die within his dominions, notwithſtanding of any teſtament the deceaſed could make. An ambaſſador is not ſubject to the right of aubane; and the Switz, Savoyards, Scots, and Portugueſe, are alſo exempted, being deemed natives and regnicoles.

AUBE, a river of France, which, ariſing in the ſouth-eaſt part of Champaign, runs north-weſt, and falls into the Seine below Plancy.

AUBIGNI, a town of France, in the province of Berry, and government of Orleans, ſituated in 2° 20′ eaſt longitude, and 47° 3′ north latitude.

AUBIN, or St. AUBIN, a town of Britany, in France; its weſt longitude being 1° 30′ and north latitude 48° 15′.

AUBIN, in horſemanſhip, a broken kind of gait, between an amble and a gallop, accounted a defect.

AUBURN, a market-town in Wiltſhire, ſituated about twenty-four miles weſt of Reading, in 1° 40′ weſt longitude, and 51° 30′ north latitude.

AUBUSSON, a town of France, in the province of Marche, and government of Lyonois: eaſt longitude 2° 15′ and north latitude 45° 55′.

AUCTION, *auctio*, a kind of public ſale,

body; and, in the latter, it carries them from it. In each caſe, the particles are moved in the ſame manner among themſelves by the attracting, electric, or magnetic power. See the articles COHESION and REPULSION.

The ſecond ſpecies of attraction, is that of electrical bodies, as glaſs, amber, ſealing-wax, jet, &c. for the properties of which, ſee ELECTRICITY.

For the properties of the third kind of attraction, ſee the article MAGNET.

The fourth kind of attraction, *viz.* that of gravitation, though reckoned a diſtinct ſpecies from that of coheſion; yet, when well conſidered, may be found perhaps to differ from it no otherwiſe than as a whole from the parts: for the gravity of large bodies may be only the reſult or aggregate of the particular powers of the conſtituent particles, which ſingly act only in contact, and in ſmall diſtances; but with their joint forces, in vaſt quantities, produce a mighty power, whoſe efficacy extends to very great diſtances, proportional to the magnitudes of the bodies.

This attractive force of gravity is, to ſenſe, the ſame for any diſtance near the ſurface of the earth; becauſe ſuch diſtance does not ſenſibly alter the diſtance from the center of the earth. But when the diſtance is ſo great as to bear a conſiderable proportion to the ſemi-diameter of the earth, then will the power of gravity decreaſe very ſenſibly: thus, at the diſtance of the moon, which is, at a medium, about ſixty ſemi-diameters of the earth, the power of gravity will be to that on the earth's ſurface, as 1 to 3600. See the articles GRAVITY, GRAVITATION, and CENTRAL FORCES.

As the attraction of coheſion is the cauſe of the ſolidity of ſmall bodies, ſo is the attraction of gravitation that chain, which being diffuſed over the ſolar ſyſtem, preſerves the planets in their orbits, and makes them revolve about the center of the ſyſtem. See SYSTEM.

That the attraction of gravitation and coheſion is the act of an immaterial cauſe, in virtue whereof inactive matter performs the offices for which it was deſigned; or that theſe diſpoſitions in bodies are not the reſult of any mechanical cauſe whatever; that is, ſuch as may ariſe from the effluvia of bodies, or the action of any other material ſubſtance, Mr. Rowning demonſtrates as follows: In the firſt place it is well known, that, if gravity acts upon bodies with the ſame degree of intenſeneſs, whether they be in motion or at reſt, it may be demonſtrated, that bodies, when projected, will deſcribe parabolas; and that, when vibrating in cycloids, their vibrations will be iſochronous, &c. In the next place, it is well known, that bodies, when projected, do deſcribe parabolas, and that, when vibrating in cycloids, their vibrations are iſochronous, &c. From which two properties it demonſtratively follows, that if gravity be the cauſe of the two abovementioned effects, it muſt act upon bodies with the ſame force, whether they be in motion or at reſt. Again, it is well known, that if attraction of coheſion acts upon rays of light with the ſame degree of intenſeneſs, whatever be the velocity they move with, it may be demonſtrated, that the ratio of the ſine of the angle of incidence to the ſine of the angle of refraction will be given. But in refraction of light, the ratio of theſe ſines is given in fact; if, therefore, attraction of coheſion be the cauſe of the refraction of light, it muſt act upon rays of light with the ſame intenſeneſs, whatever velocity they move with. See the articles LIGHT, REFRACTION, &c.

But no effluvia of bodies, no material ſubſtance, and, in ſhort, no material cauſe whatever, can act with the ſame intenſeneſs, or have the ſame effect upon a body in motion, as upon the ſame body at reſt; becauſe body can only act upon body, according to the ſum or difference of their motions. It remains therefore, that the two diſpoſitions herein mentioned are not the reſult of any material cauſe whatever. See the article MOTION.

Under the articles FLUID and CAPILLARY TUBES, may be ſeen how any fluid will aſcend above the common ſurface in capillary tubes, &c. by means of attraction; but the moſt notable and obvious motion of fluids, ariſing from attraction, is that of the tides; the theory of which we have explained at large under the article TIDES.

ATTRACTIVE, *attractivus, attractrix*, ſomething that has the power and property of attraction. See ATTRACTION.

ATTRACTIVE POWER, or FORCE, *vis attractiva*. See the articles POWER and ATTRACTION.

ATTRACTIVES, or ATTRACTIVE REMEDIES, medicines applied externally, that by their warmth and activity, penetrate the pores, mixing with, and rarefying all ob-

obſtructed matter, ſo as to fit it for diſcharge, upon laying open the part. Theſe are the ſame with what we call drawers, ripeners, maturants, and digeſtives.

The principal ſimples of this claſs are moſt kinds of fat, the dungs of pigeons and cows, bran, yeſt, herring, melilot, tobacco, oil, pitch, reſin, frankincenſe, &c. See the article SUPPURATIVES.

ATTRIBUTE, *attributum*, in a general ſenſe, that which agrees with ſome perſon or thing; or a quality determining ſomething to be after a certain manner. Thus, underſtanding is an attribute of mind, and extenſion an attribute of body.

That attribute which the mind conceives as the foundation of all the reſt, is called its eſſential attribute; thus, extenſion is by ſome, and ſolidity by others, eſteemed the eſſential attributes of body or matter.

ATTRIBUTES, in theology, the ſeveral qualities or perfections of the divine nature, or ſuch as we conceive to conſtitute the proper eſſence of God; as his wiſdom, power, juſtice, goodneſs, &c.

The heathen mythologiſts divided the deity into as many diſtinct beings as he had attributes. Thus his power was Jupiter; his abſolute will, Fate; his wrath and vengeance, Juno, &c.

ATTRIBUTES, in logic, are the predicates of any ſubject, or what may be affirmed or denied of any thing. See the article PREDICATE.

ATTRIBUTES, in painting and ſculpture, are ſymbols added to ſeveral figures, to intimate their particular office and character.

Thus the eagle is an attribute of Jupiter; a peacock, of Juno; a caduce, of Mercury; a club, of Hercules; and a palm, of Victory. For the attributes of the apoſtles. See the article APOSTLE.

ATTRITION, *attritio*, the rubbing or ſtriking of bodies one againſt another, ſo as to throw off ſome of their ſuperficial particles.

The grinding or poliſhing of bodies is performed by attrition, the effects of which are heat, light, fire, and electricity.

ATTRITION is alſo often uſed for the friction of ſuch ſimple bodies as do not wear from rubbing againſt one another, but whoſe fluids are, by that motion, ſubjected to ſome particular determination; as the various ſenſations of hunger, pain and pleaſure, are ſaid to be occaſioned by the attrition of the organs formed for ſuch impreſſions.

ATTRITION, among divines, ſignifies a ſorrow or repentance for having offended God, ariſing chiefly from the apprehenſions of puniſhment, the loſs of heaven, and the torments of hell; and differs from contrition, in as much as this laſt is conceived to ariſe from a love to God, as an ingredient or chief motive to our ſorrow and repentance. See the article CONTRITION.

AVA, a kingdom of India, beyond the Ganges, ſituated on the north-eaſt part of the bay of Bengal, between the countries of Arracan on the north, and Pegu on the ſouth.

AVALON, a town of Burgundy, in France, ſituated in 3° 50′ eaſt longitude, and 47° 25′ north latitude.

AVANT, a french term, contracted by us into van. See the article VAN.

AVAST, in the ſea language, a term requiring to ſtop, to hold, or to ſtay.

AVAUNCHERS, among hunters, the ſecond branches of a deer's horn. See the article HEAD.

AUBANE, in the cuſtoms of France, a right veſted in the king of being heir to a foreigner that dies within his dominions.

By this right, the French king claims the inheritance of all foreigners that die within his dominions, notwithſtanding of any teſtament the deceaſed could make. An ambaſſador is not ſubject to the right of aubane; and the Switz, Savoyards, Scots, and Portugueſe, are alſo exempted, being deemed natives and regnicoles.

AUBE, a river of France, which, ariſing in the ſouth-eaſt part of Champaign, runs north-weſt, and falls into the Seine below Plancy.

AUBIGNI, a town of France, in the province of Berry, and government of Orleans, ſituated in 2° 20′ eaſt longitude, and 47° 3′ north latitude.

AUBIN, or St. AUBIN, a town of Britany, in France; its weſt longitude being 1° 30′ and north latitude 48° 15′.

AUBIN, in horſemanſhip, a broken kind of gait, between an amble and a gallop, accounted a defect.

AUBURN, a market-town in Wiltſhire, ſituated about twenty-four miles weſt of Reading, in 1° 40′ weſt longitude, and 51° 30′ north latitude.

AUBUSSON, a town of France, in the province of Marche, and government of Lyonois: eaſt longitude 2° 15′ and north latitude 45° 55′.

AUCTION, *auctio*, a kind of public ſale,

very much in uſe for houſhold goods, books, plate, &c. By this method of ſale, the higheſt bidder is always the buyer.

This was originally a kind of ſale among the antient Romans, performed by the public crier *ſub haſta*, i. e. under a ſpear ſtuck up on that occaſion, and by ſome magiſtrate, who made good the ſale by delivery of the goods.

AUCTION *by inch of candle*. See the article CANDLE.

AUDE, a river of France, which, taking its riſe in the Pyrenees, runs northwards by Alet and Carcaſſone; and from thence turning eaſtward through Languedoc, falls into the Mediterranean, a little to the north-eaſt of Narbonne.

AUDIENCE, in a general ſenſe. See the article HEARING.

AUDIENCE, given to embaſſadors, ceremonies obſerved in courts, at the admiſſion of embaſſadors, or public miniſters, to a hearing.

In England, audience is given to embaſſadors in the preſence-chamber; to envoys and reſidents, in a gallery, cloſet, or in any place where the king happens to be. Upon being admitted, as is the cuſtom of all courts, they make three bows, after which they cover and ſit down; but not before the king is covered and ſat down, and given them the ſign to put on their hats.

When the king does not care to have them covered, and ſit, he himſelf ſtands uncovered; which is taken as a ſlight.

At Conſtantinople, miniſters uſually have audience of the prime vizier.

AUDIENCE is alſo the name of a court of juſtice eſtabliſhed in the Weſt-Indies by the Spaniards, anſwering in effect to the parliaments of France.

Theſe courts take in ſeveral provinces, called alſo audiences, from the names of the tribunal to which they belong.

AUDIENCE is alſo the name of an eccleſiaſtical court, held by the archbiſhop of Canterbury, wherein differences upon elections, conſecrations, inſtitutions, marriages, &c. are heard.

Chamber of AUDIENCE. See CHAMBER.

AUDIENDO & *terminando*, a writ, or more properly a commiſſion, directed to certain perſons, when any riotous aſſembly, inſurrection, &c. is committed in any place, for appeaſing it, and puniſhing the offenders.

AUDIT, a regular hearing and examination of an account by ſome proper officers, appointed for that purpoſe.

AUDITA QUERELA, a writ that lies uſually where one is bound in a ſtatute merchant, ſtatute ſtaple, or recognizance, where a perſon has any thing to plead, but hath not a day in a court for pleading it; or where judgment is given for debt, and the defendant's body in execution; then if he have a releaſe, or other ſufficient cauſe to be diſcharged therefrom, but wants a day in court to plead the ſame, this writ may be granted him againſt the perſon that has recovered, or againſt his executors.

This writ is granted by the lord-chancellor, upon view of the exception ſuggeſted to the judges of either bench, willing them to grant ſummons to the ſheriffs of the county, where the creditor is, for his appearance, at a certain day, before them.

AUDITOR, in a general ſenſe, a hearer, or one who liſtens and attends to any thing.

AUDITOR is alſo uſed for ſeveral officers, appointed to audit. See AUDIT.

It was antiently uſed for a judge. Notaries are alſo frequently called auditores.

AUDITOR, according to our law, is an officer of the king, or ſome other great perſon, who by examining yearly the accounts of the under-officers, makes up a general book, with the difference between their receipts and charges, and their allowances or allocations.

AUDITOR *of the receipts* is an officer of the exchequer who files the tellers bills, makes an entry of them, and gives the lord-treaſurer a certificate of the money received the week before. He alſo makes debentures to every teller, before they receive any money, and takes their accounts. He keeps the black book of receipts, and the treaſurer's key of the treaſury, and ſees every teller's money locked up in the new treaſury.

AUDITORS *of the revenue, or of the exchequer*, officers who take the accounts of thoſe who collect the revenues and taxes raiſed by parliament, and take the accounts of the ſheriffs, eſcheators, collectors, tenants, and cuſtomers, and ſet them down in a book and perfect them.

AUDITORS *of the preſt and impreſt* are officers of the exchequer, who take and make up the accounts of Ireland, Berwick, the Mint, and of any money impreſſed to any man for the king's ſervice.

AUDITORS *collegiate, conventual*, &c. officers formerly apppointed in colleges, &c. to examine and paſs their accounts.

AUDI-

AUDITORY, the adjective, ſomething relating to the ſenſe of hearing. See the article HEARING.

AUDITORY, or AUDIENCE, an aſſembly of people who attend to hear a perſon that ſpeaks in public.

AUDITORY is alſo uſed for the bench whereon a magiſtrate or judge hears cauſes.

AUDITORY was alſo the place in antient churches where the congregation ſtood to hear preaching.

Meatus AUDITORIUS, auditory paſſage, in anatomy, ſee MEATUS AUDITORIUS.

AUDITORY NERVES, in anatomy, a pair of nerves ariſing from the medulla oblongata, with two trunks, the one of which is called the *portio dura*, hard portion; the other *portio mollis*, or ſoft portion. See the article NERVE.

The *portio mollis* enters the foramen of the os petroſum, and thence through various little apertures, gets into the labyrinth of the ear, where it expands over all its parts, and conſtitutes the primary organ of hearing.

The *portio dura*, paſſing the aquæduct of Fallopius, turns back one or more branches from the anterior ſurface of the proceſs of the petroſum, into the cavity of the cranium. It ſends off alſo another branch internally, which with the branch from the fifth pair, ſerves for the conſtruction of the chorda tympani. It alſo ſends off a number of other ſmaller ramifications, which run to the muſcles and other parts of the tympanum.

AVEIRO, a ſea-port town of Portugal, ſituated near the ocean, at the mouth of the river Vouga, about twenty-eight miles ſouth of Oporto, in 9° 8′ weſt longitude, and 40° 32′ north latitude.

AVELLANE, in heraldry, a croſs, the quarters of which ſomewhat reſemble a filbert-nut.

Sylvanus Morgan ſays, that it is the croſs which enſigns the mound of authority, or the ſovereign's globe.

AVE-MARIA, the angel Gabriel's ſalutation of the virgin Mary, when he brought her the tidings of the incarnation. It is become a prayer, or form of devotion, in the romiſh church. Their chaplets and roſaries are divided into ſo many ave-maries, and ſo many pater-noſters, to which the papiſts aſcribe a wonderful efficacy.

Dr. Bingham obſerves, that among all the ſhort prayers uſed by the primitive chriſtians before their ſermons, there is not the leaſt mention of an ave-maria.

AVENA, the OAT, in botany. See the article OAT.

AVENOR, an officer belonging to the king's ſtables, who provides oats for the horſes. He acts by warrant from the maſter of the horſe. See the article MASTER *of the horſe*.

AVENUE, in gardening, a walk planted on each ſide with trees, and leading to an houſe, garden-gate, wood, &c. and generally terminated by ſome diſtant object. The width of avenues ſhould be twelve or fourteen feet greater than the whole breadth of the houſe; and for thoſe that lead to woods or proſpects, they ought not to be leſs than ſixty feet in breadth. The trees proper for planting avenues, are the engliſh elm, the lime tree, the horſe-cheſnut, the beech, and the abele.

The method of planting avenues with regular rows of trees, is with good reaſon now much diſuſed; for nothing can be more abſurd, than to have the ſight contracted by two or more lines of trees, which ſhut out the view of the verdure and natural beauties of the adjacent grounds: but as ſome perſons prefer avenues to the moſt beautiful diſpoſition of lawns, gardeners have introduced a more magnificent way of planting them, which is, to place the trees in clumps or platoons, at about three hundred feet diſtance from each other, making the opening much wider than before.

AVENUE, in fortification, an opening or inlet into a fort, baſtion, or the like. See the article BASTION.

AVERAGE, in law, an antient ſervice which the tenant owed to his lord by horſe or carriage.

AVERAGE, in commerce, ſignifies the accidents and misfortunes which happen to ſhips and their cargoes, from the time of their loading and ſailing to their return and unloading; and is divided into three kinds. 1. The ſimple or particular average, which conſiſts in the extraordinary expences incurred for the ſhip alone, or for the merchandizes alone. Such is the loſs of anchors, maſts, and rigging, occaſioned by the common accidents at ſea; the damages which happen to merchandize by ſtorm, prize, ſhipwreck, wet or rotting; all which muſt be borne and paid by the thing which ſuffered the damage. 2. The large and common average, being thoſe expences incurred, and damages ſuſtained for the common good and ſecurity both of the

merchandizes and veſſels conſequently to be borne by the ſhip and cargo, and to be regulated upon the whole. Of this number are the goods or money given for the ranſom of the ſhip and cargo, things thrown over-board for the ſafety of the ſhip, the expences of unlading for entering into a river or harbour, and the proviſions and hire of the ſailors, when the ſhip is put under an embargo. 3. The ſmall averages, which are the expences for towing and pilotting the ſhip out of, or into harbours, creeks, or rivers, one third of which muſt be charged to the ſhip, and two thirds to the cargo.

Average is more particularly uſed for a certain contribution, that merchants make proportionably towards their loſſes. It alſo ſignifies, a ſmall duty which thoſe merchants who ſend goods in another man's ſhip, pay to the maſter, for his care of them over and above the freight. Hence it is expreſſed in the bills of lading, paying ſo much freight for the ſaid goods with primage and average accuſtomed.

AVERAGE, in agriculture, a term uſed for breaking up cornfields, eddiſh, or roughings.

AVERDUPOIS, or AVERDUPOIS-WEIGHT, a ſort of weight uſed in England, the pound whereof is made up of ſixteen ounces. See WEIGHT.

This is the weight for the larger and coarſer commodities, ſuch as groceries, cheeſe, wool, lead, &c. Bakers who live not in corporation-towns, are to make their bread by averdupois-weight, thoſe in corporations, by troy-weight. Apothecaries buy by averdupois-weight, but ſell by troy. The proportion of a pound averdupois to a pound troy is as 17 to 14.

AVERIA, in a general ſenſe, ſignifies any cattle, but is uſed in law for oxen, or horſes of the plough.

AVERMENT, an offer of the defendant, to make good an exemption pleaded in abatement, or bar of the plantiff's action.

General AVERMENT is the concluſion of every plea to the writ, or in bar of replications, or other pleadings, containing matter affirmative.

Particular AVERMENT is when the life of a tenant for life, or tenant in tail, is averred.

AVERNI, among antient naturaliſts, certain lakes, grottoes, and other places which infect the air with poiſonous ſteams or vapours, called alſo mephites.

AVER-PENNY, money paid in lieu of average. See the article AVERAGE.

AVERRHOA, a genus of the decandria pentagynia claſs of plants, whoſe flower conſiſts of five lanceolated petals, the fruit is an apple of a turbinated and obtuſe pentagonal figure, containing five cells, wherein are diſpoſed angular ſeeds, ſeparated by membranes.

AVERRUNCATION, in the antient agriculture, the ſame with pruning. See the article PRUNING.

AVERRUNCI, in the antient heathen theology, an order of deities among the Romans, whoſe peculiar office it was to avert danger and exile.

Apollo, and Hercules are ſuppoſed to be of this order.

AVERSA, a town of Naples, in the province of Lavoro, ſituated about ſeventeen miles ſouth of Capua, in 14° 45′ eaſt longitude, and 41° 15′ north latitude.

AVERSION, *averſio*, a diſtaſte, a diſlike, or abhorrence of ſomething.

The term averſion, though chiefly uſed in a moral ſenſe, is ſometimes uſed in a natural one; in which laſt caſe, it is ſynonymous with antipathy. See the article ANTIPATHY.

AVERTI, a term uſed in the manege, to ſignify ſuch a pace of a horſe, as is regulated, and required in the leſſons. *Pas ecouté*, *pas d'ecole*, among the French, ſignify the ſame thing.

AVES, ſome ſmall iſlands, belonging to the Dutch on the coaſt of Terra Firma, in ſouth America.

AVESNES, a little fortified town of Hainault, in the French Netherlands, ſituated about twenty-one miles ſouth of Mons, in 3° 40′ eaſt longitude, and 50° 10′ north latitude.

AUGES, in aſtronomy, the ſame with apſides. See the article APSIS.

AUGMENT, *augmentum*, in grammar, an accident of certain tenſes of greek verbs, being either the prefixing of a ſyllable, or an increaſe of the quantity of the initial vowels.

Of theſe there are two kinds, the *augmentum temporale*, or of a letter, when a ſhort vowel is changed into a long one, or a diphthong into another longer one; and *augmentum ſyllabicum*, or of a ſyllable, when a ſyllable is added at the beginning of the word.

AUGMENTS, in mathematics. See the articles FLUXION and MOMENT.

AUGMENTATION, αὔξησις, in a gene-

ral

ral ſenſe, is the act of adding or joining ſomething to another, with a deſign to render it more large and conſiderable.

AUGMENTATION is alſo uſed for the addition or thing added.

AUGMENTATION was alſo the name of a court erected 27 Hen. VIII. ſo called from the augmentation of the revenues of the crown, by the ſuppreſſion of religious houſes; and the office ſtill remains, wherein there are many curious records, tho' the court has been diſſolved long ſince.

AUGMENTATION, in heraldry, are additional charges to a coat-armour, frequently given as particular marks of honour, and generally borne, either on the eſcutcheon or a canton; as have all the baronets of England, who have borne the arms of the province of Ulſter in Ireland.

AUGRE, or AWGRE, an inſtrument uſed by carpenters and joiners, to bore large round holes; and conſiſting of a wooden handle, and an iron blade, terminated at bottom with a ſteel bit.

AUGSBURG, a conſiderable city of Swabia in Germany; ſituated in 11° eaſt longitude, and 48° 20′ north latitude.

It is an imperial city, and remarkable for being the place where the Lutherans preſented their confeſſion of faith to the emperor Charles V. at a diet of the empire held in 1550; from hence denominated the *augſburg confeſſion*.

AUGUR, an officer among the Romans appointed to foretell future events, by the chattering and feeding of birds. There was a college or community of them conſiſting originally of three members, with reſpect to the three tribes, Luceres, Rhamnenſes, and Tatienſes: afterwards the number was increaſed to nine, four of whom were patricians and five plebeians. They bore an augural ſtaff or wand, as the enſign of their authority, and their dignity was ſo much reſpected, that they were never depoſed, nor any ſubſtituted in their place, though they ſhould be convicted of the moſt enormous crimes. See the article AUGURY.

AUGURAL, ſomething belonging to augurs or augury: thus, we meet with augural inſtruments, augural books, &c.

AUGURY, in antiquity, a ſpecies of divination, or the art of foretelling future events, is diſtinguiſhed into five ſorts. 1. Augury from the heavens. 2. From birds. 3. From chickens. 4. From quadrupeds. 5. From portentous events. When an augury was taken, the augur divided the heavens into four parts, and having ſacrificed to the gods, he obſerved, with great attention, from what part the ſign from heaven appeared. If, for inſtance, there happened a clap of thunder from the left, it was taken as a good omen. If a flock of birds came about a man, it was a favourable preſage, but the flight of vultures was unlucky. If, when corn was flung before the ſacred chickens, they crouded about it, and eat it greedily, it was looked upon as a favourable omen, but if they refuſed to eat and drink, it was an unlucky ſign. See the article DIVINATION.

AUGUST, in chronology, the eighth month of our year, containing thirty-one days, and ſo called from the emperor Auguſtus.

AUGUSTA, or AUSTA, an iſland in the gulph of Venice, on the coaſt of Dalmatia; ſituated in 17° 40′ eaſt longitude, and 42° 35′ north latitude.

AUGUSTALES, in roman antiquity, an epithet given to the flamins or prieſts appointed to ſacrifice to Auguſtus, after his deification, and alſo to the ludi or games celebrated in honour of the ſame prince on the fourth of the ides of October.

AUGUSTALIA, a feſtival inſtituted by the Romans, in honour of Auguſtus Cæſar, on his return to Rome after having ſettled peace in Sicily, Greece, Syria, Aſia, and Parthia; on which occaſion they likewiſe built an altar to him, inſcribed *Fortunæ reduci*.

AUGUSTALIS PRÆFECTUS, a title peculiar to a roman magiſtrate who governed Egypt, with a power much like that of a proconſul in other provinces.

AUGUSTAN, in a general ſenſe, denotes, ſomething relating to the emperor Auguſtus: thus, we ſay, *Auguſtan age*, *Auguſtan æra*, &c.

AUGUSTIN, or St. AUGUSTIN, the capital town of ſpaniſh Florida, in north America; ſituated near the frontiers of Georgia, in 81° weſt longitude, and 30° north latitude.

Cape-AUGUSTIN, a cape of Brazil, in ſouth America; lying in 35° weſt longitude, and 8° 30′ ſouth latitude.

AUGUSTINS, a religious order in the church of Rome, who follow the rule of St. Auguſtin, preſcribed them by Pope Alexander IV. Among other things, this rule enjoins to have all things in common, to receive nothing without the leave of the ſuperior; and ſeveral other precepts relating to charity, modeſty, and

and chaſtity. There are likewiſe nuns of this order.

The auguſtins are cloathed in black, and at Paris are known under the name of the religious of St. Genevieve, that abbey being the chief of the order.

AVIARY, a place ſet apart for feeding and propagating birds. It ſhould be ſo large, as to give the birds ſome freedom of flight, and turfed, to avoid the appearance of foulneſs on the floor.

AVICENNIA, in botany, a genus of plants of the *tetrandria monogynia* claſs of Linnæus, the flower of which conſiſts of a ſingle petal, divided into four ovato-acuminated ſegments, the fruit is a coriaceous capſule of one cell, containing a ſingle ſeed of an elliptic figure.

AVIGNON, a large city of Provence, in France; ſituated on the eaſt ſide of the river Rhone, about twenty miles ſouth of Orange, in 4° 40′ eaſt longitude, and 43° 50′ north latitude.

Avignon is an archbiſhop's ſee, and with the whole diſtrict of Venaiſſine, ſubject to the pope.

AVILA, a beautiful city of old Caſtile in Spain, ſituated fifty miles north-weſt of Madrid, in 5° 20′ weſt longitude, and 40° 50′ north latitude.

AVILES, a ſea-port town of Aſturia, in Spain, in 6° 40′ weſt longitude, and 43° 30′ north latitude.

AVIS, BIRD, in zoology. See the articles BIRD and ORNITHOLOGY.

AUKLAND, a market-town on the river Ware, in the biſhopric of Durham; ſituated about twelve miles ſouth-weſt of the city of Durham, in 1° 25′ weſt longitude, and 54° 40′ north latitude.

AUL, or AWL. See the article AWL.

AULA, is uſed for a court-baron, by Spelman; by ſome old eccleſiaſtical writers, for the nave of a church, and ſometimes for a court-yard.

AULCESTER, a market-town of Warwickſhire; ſituated about fourteen miles ſouth-weſt of Warwick, in 1° 50′ weſt longitude, and 52° 20′ north latitude.

AULIC, an epither given to certain officers of the empire, who compoſe a court, which decides, without appeal, in all proceſſes entered in it. Thus we ſay, aulic council, aulic chamber, aulic counſellor. The aulic council is compoſed of a preſident, who is a catholic; of a vice chancellor, preſented by the archbiſhop of Mentz; and of eighteen counſellors, nine of whom are proteſtants, and nine catholics. They are divided into a bench of lawyers, and always follow the emperor's court, for which reaſon they are called *juſtitium imperatoris*, the emperors's juſtice, and aulic council. The aulic court ceaſes at the death of the emperor, whereas the imperial chamber of Spire is perpetual, repreſenting not only the deceaſed emperor, but the whole germanic body, which is reputed never to die.

AULIC, in the ſorbonne and foreign univerſities, is an act which a young divine maintains upon being admitted a doctor in divinity.

It begins by an harangue of the chancellor, addreſſed to the young doctor, after which he receives the cap, and preſides at the aulic, or diſputation.

AULNEGER, or ALNAGER. See the article ALNAGER.

AULOS, αὐλὸς, a grecian long-meaſure, the ſame with ſtadium. See STADIUM.

AUMONE, in law, ſignifies a tenure, where lands are given in alms, to ſome church or religious houſe. See the article FRANK-ALMOIGN.

AUNCEL-WEIGHT, an antient kind of balance, now out of uſe, being prohibited by ſeveral ſtatutes, on account of the many deceits practiſed by it. It conſiſted of ſcales hanging on hooks, faſtened at each end of a beam, which a man lifted up on his hand. In many parts of England, auncel weight ſignifies meat ſold by the hand, without ſcales.

AUNCESTREL HOMAGE. See the article HOMAGE.

AUNIS, a maritime province of France, on the weſtern ſhore of the bay of Biſcay; having the province of Poictou on the north, and Santoigne on the ſouth.

AVOCATORIA, a mandate of the emperor of Germany, addreſſed to ſome prince, in order to ſtop his unlawful proceedings in any cauſe appealed to him.

AVOIDANCE, in the canon law, is when a benefice becomes void of an incumbent, which happens either in fact, as by the death of the parſon, or in law, as by ceſſion, deprivation, reſignation, &c. In the firſt of theſe caſes, the patron muſt take notice of the avoidance, at his peril; but in avoidance by law, the ordinary is obliged to give notice to the patron, in order to prevent a lapſe.

AVOIRDUPOIS, or AVERDUPOIS. See the article AVERDUPOIS.

AVON, a river of England, which, taking its riſe in Wiltſhire, runs by Bath, where it becomes navigable, and continues its courſe

courſe towards Briſtol, below which city it falls into the Severn.

AVON is alſo a river, which, ariſing in Leiceſterſhire, runs ſouth-weſt by Warwick and Eveſham, and falls into the Severn at Tewkſbury in Glouceſterſhire.

AVOSETTA, in ornithology, a ſpecies of recurviroſtra, being an extreme ſingular bird, variegated with black and white, and about the ſize of a common lapwing. See the article RECURVIROSTRA.

AVOWEE, one who has a right to preſent to a benefice. See ADVOWSON.

He is thus called in contradiſtinction to thoſe who only have the lands to which the advowſon belongs for a term of years, or by virtue of intruſion or diſſeiſin. See the articles INTRUSION, &c.

AVOWRY, in law, is where a perſon diſtrained ſues out a replevin, for then the diſtrainer muſt avow, and juſtify his plea, which is called his avowry. See the article REPLEVIN.

The avowry muſt contain ſufficient matter for judgment to have return, but ſo much certainty is not required therein, as in a declaration; and if made for rent, though it appears that part of that rent is not due, yet the avowry is good for the reſt.

AURA, among phyſiologiſts, ſignifies a vapour or exhalation, ſuch as thoſe which ariſe from mephitical caves. See the articles VAPOUR, and EXHALATION.

AURACH, a town of Swabia, in Germany, ſituated about fifteen miles eaſt of Tubingen; in 9° 20′ eaſt longitude, and 48° 25′ north latitude.

AVRANCHES, a large, ſtrong and well ſituated city of France in the lower Normandy; ſituated in 1° 16′ weſt longitude, and 48° 41′ north latitude.

AURANTIUM, the ORANGE-TREE, in botany, makes a diſtinct genus, according to Tournefort, but is comprehended under citrus, by Linnæus. See the articles ORANGE and CITRUS.

AURAY, a ſea-port town of Brittany, in France; ſituated about eighteen miles ſouth-eaſt of Port-Lewis, in 2° 45′ weſt longitude, and 47° 40′ north latitude.

AUREA ALEXANDRINA, in pharmacy, an electuary compounded of above ſeventy ingredients, one of which was pure gold; and recommended by its inventor Alexander, a phyſician, as an antidote againſt the colic and apoplexy.

AURENGABAD, a large city in the province of Viſiapour, in India, on this ſide the Ganges, eaſt longitude 75° 30′, and north latitude 19° 25′.

AUREOLA, in its original ſignification, denotes a jewel, which is propoſed as a reward of victory in ſome public diſpute. Hence, the roman ſchoolmen applied it to the reward beſtowed on martyrs, virgins, and doctors, on account of their works of ſupererogation; and painters uſe it to ſignify the crown of glory, with which they adorn the heads of ſaints, confeſſors, &c.

AURES MARINÆ, EAR SHELLS, in natural hiſtory, a name given to different ſpecies of the haliotis. This is an univalve ſhell-fiſh of a flatted ſhape, ſomewhat reſembling the human ear; its mouth is the wideſt of all ſhells, except the limpet. See the article HALIOTIS, and plate XXIV. fig. 3.

AUREUS, a roman gold-coin, equal in value to twenty-five denarii.

According to Ainſworth, the aureus of the higher empire weighed near five penny-weight, and in the lower empire, little more than half that weight. We learn from Suetonius, that it was cuſtomary to give aurei to the victors in the chariot races.

AURICH, a town of Weſtphalia, in Germany; ſituated about twelve miles north eaſt of Embden, in 6° 50′ eaſt longitude, and 53° 40′ north latitude.

AURICHALCUM, or ORICHALCUM. See the article ORICHALCUM.

AURICLE, in anatomy, that part of the ear which is prominent from the head, called by many authors *auris externa*. See the article EAR.

AURICLES of the heart. Theſe are a kind of appendages of the heart at its baſe, and are diſtinguiſhed by the names of the right and left. The right auricle is much larger than the left, and this is placed in the hinder, that in the anterior part. They are intended as diverticula for the blood, during the ſyſtole. Their ſubſtance is muſcular, being compoſed of ſtrong fibres, and their motion is not ſynchronous but achronous with that of the heart. See the article HEART.

AURICULÆ *primus & ſecundus muſculus*, two muſcles of the ear, otherwiſe called ſuperior and retrahens. See the articles SUPERIOR and RETRAHENS.

AURICULAR, whatever belongs or relates to the ear. Thus we ſay, auricular witneſs, auricular confeſſion, &c. as being done ſecretly, and as it were in the ear.

AURI-

AURICULAR MEDICINES, ſuch as are uſed in the cure of diſtempers in the ear. See the article EAR.

AURIGA, the WAGGONER, in aſtronomy, a conſtellation of the northern hemiſphere, conſiſting of twenty-three ſtars, according to Tycho, 40 according to Hevelius, and 68 in the britannic catalogue.

AURILLAC, a neat and well-built city of France, in the upper Auvergne, noted for its trade in bone-lace: it is ſituated in 3° 31′ eaſt long. and 54° 44′ north lat.

AURIPIGMENTUM, *orpiment*, in natural-hiſtory. See the article ORPIMENT.

AURIS, the EAR, in anatomy. See EAR.

AURIS ELEVATOR, EXTERNUS, OBLIQUUS, TINNITUS, *&c.* See the article ELEVATOR, *&c.*

AURISCALPIUM, an inſtrument to clean the ears, and ſerving alſo for other operations in diſorders of that part.

AURORA, the morning twilight, or that faint light which begins to appear in the morning, when the ſun is within eighteen degrees of the horizon. See TWILIGHT.

AURORA BOREALIS is an extraordinary meteor, ſhewing itſelf in the night-time, in the northern parts of the heavens.

The moſt general phænomena of it are theſe: 1. In the northern parts of the horizon, there is an apparent, though not real cloud extended ſometimes farther towards the weſt than to the eaſt, and ſometimes farther towards the eaſt than weſt, taking up nearly a quarter of the horizon. 2. The upper edge of this cloud is generally terminated with one or more lucid arches, and ſometimes by a long bright ſtreak of light, lying parallel to the horizon. 3. Out of theſe arches proceed ſtreams of light generally perpendicular to the horizon, but ſometimes a little inclined to it, and very much reſembling the tail of comets. 4. The upper ends of the ſtreams appear and vaniſh inceſſantly, which cauſes ſuch a ſeeming trembling in the air, that you would think the upper part of the heavens to be as it were in convulſions. 5. When all the ſtreamings are over, the aurora commonly degenerates into a bright twilight in the north, and then gradually dies away.

The ſolutions of the phænomena of the aurora borealis are various. Dr. Halley has recourſe to the magnetic effluvia which he ſuppoſes enters the earth near the ſouth pole, and pervading its pores, paſs out again at the ſame diſtance from the northern; and thinks, that by the concourſe of ſeveral cauſes, they may be capable of producing a ſmall degree of light, either from the greater denſity of the matter, or from the greater velocity of its motion, after the ſame manner as we ſee the effluvia of electric bodies emit light in the dark. Monſieur de Marain endeavours to prove that it is owing to the zodiacal light, or the atmoſphere of the ſun, which mixing with our atmoſphere, and being of an heterogeneous nature, produces the ſeveral appearances of the aurora borealis. Mr. Maier, of the academy at Peterſburg, accounts for it from exhalations fermenting and taking fire in the atmoſphere; and Mr. Rowning gives a very ingenious and natural ſolution of all the above phænomena, from ſuch effluvia as are continually exhaled from the ſurface and bowels of the earth.

The aurora borealis is a very common phænomenon in countries near the pole; but there are not many upon record, as having appeared in England before that of March the 6th, $17\frac{15}{16}$. Since that time, however, they have been and ſtill continue very frequent.

AURUM, GOLD, in natural hiſtory. See the article GOLD.

The latin term *aurum* is chiefly uſed to denote certain chemical preparations, whereof gold is the principal ingredient. Such are, 1. Aurum fulminans, being a ſolution of gold in aqua regia, and precipitated with ſalt of tartar. This gives a much ſmarter and louder report than the common pulvis fulminans. 2. Aurum muſivum or moſaicum, which is made of tin, flowers of ſulphur, crude ſal armoniac, and purified quickſilver, by mixing and ſubliming the whole in a mattraſs. The aurum muſivum will be found under the ſublimed part, in the bottom of the mattraſs, and may be preſcribed in a doſe from four grains to a ſcruple, to kill worms in children. 3. Aurum potabile, potable gold. This is a compoſition made of gold, by ſeparating its ſalt and ſulphur, and then diſſolving it in a liquor, which takes the name of tincture of gold. It is ſuppoſed to poſſeſs the virtues of a cordial and ſudorific, but theſe can never be aſcribed to the gold, for it remains ſtill gold, and may be ſeparated in its own proper form by mere evaporation. 4. Aurum philoſophorum, which the alchemiſts hold ſtill more ſimple than gold, as conſiſting of mercury perfectly cleared from all ſulphur; but whether

whether there be any ſuch thing in nature, is a queſtion not yet decided.

AUSPICIUM, AUSPICY, the ſame with augury. See the article AUGURY.

Some authors indeed have ſuppoſed, that auſpicy regarded only the flight of birds, and therefore diſtinguiſhed it from augury, which obſerved the noiſe, chirping, and chattering of birds; but this is a diſtinction not always obſerved.

AUSTERE, rough, aſtringent. Thus an auſtere taſte is ſuch a one as conſtringes the mouth and tongue with ſome auſterity; as the taſte of unripe fruit.

Things of an auſtere taſte are ſuppoſed by ſome, from their glutinous quality, to generate the ſtone.

AUSTERITY, among moral writers, implies ſeverity and rigour. Thus we ſay, auſterity of manners.

Auſterity of bodies, according to the Carteſians, conſiſts in having obtuſe angular particles, like a blunt ſaw.

AUSTRAL, *auſtralis*, ſomething relating to the ſouth: thus the ſix ſigns on the ſouth ſide of the equinoctial are called auſtral ſigns.

AUSTRAL FISH, *auſtralis piſcis*, a ſmall conſtellation of the ſouthern hemiſphere, inviſible to us.

AUSTRIA, a circle of Germany, comprehending the arch-dutchy of Auſtria, alſo Styria, Carinthia, Carniola, Tyrol, Trent, and Brixen.

It is bounded by Bohemia and Moravia on the north; by Hungary, Sclavonia, and Croatia on the eaſt; by the dominions of Venice on the ſouth, and by Bavaria on the weſt.

AUSTRIAN NETHERLANDS. See the article NETHERLANDS.

AUTER FOIS ACQUIT, in law, a plea made by a criminal that he has been already acquitted of the ſame crime, with which he is charged. There are likewiſe pleas of auter fois convict and attaint, that he has been before convicted of the ſame felony.

AUTHENTIC, ſomething of acknowledged and received authority. In law it ſignifies ſomething cloathed in all its formalities, and atteſted by perſons to whom credit has been regularly given. Thus, we ſay, authentic papers, authentic inſtruments. In muſic, authentic is a term applied to four of the church modes or tones, which riſe a fourth above their dominants, which are always a fifth above their finals; in this diſtinguiſhed from the plegal modes, which fall a fourth below their finals. Thus when an octave is divided arithmetically according to the numbers 2, 3, 4, that is, when the fifth is flat, and the fourth ſharp, the mode or tone is called authentic, in contradiſtinction to the plegal tone, where the octave is divided harmonically, by the numbers 3, 4, 6, which makes the fourth a flat, and the fifth a ſharp. See MODE, TONE, *&c.*

AUTHENTICATING, the making a thing authentic. See the preceding article.

AUTHOR properly ſignifies one who created or produced any thing. Thus God, by way of eminence, is called the author of nature, the author of the univerſe.

The word author is ſometimes employed in the ſame ſenſe as inventor. As, Othe de Guerick is reported to be the author of the barometer.

AUTHOR, in matters of literature, a perſon who has compoſed ſome book or writing.

Authors may be diſtinguiſhed into ſacred and profane, antient and modern, known and anonymous, Greek, Latin, Engliſh, French, *&c.* and with regard to the ſubjects they treat, into divines, philoſophers, orators, hiſtorians, poets, grammarians, phyſiologiſts, *&c.*

An original author is he, who, in treating any ſubject, does not follow any other perſon, or imitate any model, either in the matter, or method of his compoſition. For inſtance, M. de Fontenelle is an original author in his Plurality of Worlds, but not in his Dialogues of the Dead.

AUTHORITY, in a general ſenſe, ſignifies a right to command, and make one's ſelf obeyed. In which ſenſe, we ſay, the royal authority, the epiſcopal authority, the authority of a father, *&c.*

Authority denotes alſo the teſtimony of an author; ſome apophthegm, or ſentence of an eminent perſon, quoted in a diſcourſe by way of proof.

Authority, in law, ſignifies a power given by word, or writing, to a ſecond perſon to act ſomething, and may be by writ, warrant, commiſſion, letter of attorney, *&c.* and ſometimes by law. An authority given to another, to do what a perſon himſelf cannot do is void; and it muſt be for doing a thing that is lawful, otherwiſe it will be no good authority.

Authority is repreſented, in painting, like a grave matron ſitting in a chair of

ſtate, richly cloathed in a garment embroidered with gold, holding in her right-hand a ſword, and in her left a ſceptre. By her ſide is a double trophy of books and arms.

AUTO DE FE, ACT OF FAITH. See the article ACT.

AUTOCEPHALOUS, αυτοκεφαλοι, in church-hiſtory, denotes archbiſhops who were independent of any patriarch.

AUTOCHTHONES, in antiquity, an appellation importing the ſame with aborigines. See the article ABORIGINES.

AUTOGRAPH, αυτογραφον, denotes a perſon's hand-writing, or the original manuſcript of any book, &c.

AUTOMATUM, or AUTOMATON, αυτομαλον, an inſtrument, or rather machine; which, by means of ſprings, weights, &c. ſeems to move itſelf as a watch, clock, &c. Such alſo were Archytus's flying dove, Regiomontanus's wooden-eagle, &c.

AUTUMN, the third ſeaſon of the year, when the harveſt and fruits are gathered in. Hence, in the language of the alchemiſts, it ſignifies the time when the philoſophers ſtone is brought to perfection.

Autumn is repreſented, in painting, by a man at perfect age, cloathed like the vernal, and likewiſe girded with a ſtarry girdle; holding in one hand a pair of ſcales equally poized, with a globe in each; in the other, a bunch of divers fruits and grapes. His age denotes the perfection of this ſeaſon, and the balance, that ſign of the zodiac, which the ſun enters when our autumn begins.

AUTUMNAL, ſomething relating to autumn. Thus,

AUTUMNAL POINT is that point of the equinox from which the ſun begins to deſcend towards the ſouth pole.

AUTUMNAL SIGNS, in aſtronomy, are the ſigns libra, ſcorpio, and ſagittarius, thro' which the ſun paſſes during the autumn. See the article ZODIAC, &c.

AUTUMNAL EQUINOX, the time when the ſun enters the autumnal point. See the article EQUINOX.

AUTUN, a city of Burgundy in France; ſituated on the river Arroux, in 4° 15′ eaſt longitude, and 46° 50′ north latit.

AUVERNE, a territory of the Lyonois in France; lying between the Bourbonois on the north, and the Cevennes on the ſouth.

AUX, or AUGH, in geography, the capital city of Gaſcony in France. It is one of the richeſt archbiſhop's ſees in France, though but a ſmall town, ſituated in 20′ eaſt longitude, and 43° 40′ north latitude.

AUXERRE, a city of Burgundy in France, ſituated on the river Yonne, in 3° 35′ eaſt longit. and 47° 40′ north latitude.

AUXILIARY, *auxiliaris*, whatever is aiding or helping to another.

AUXILIARY VERBS, in grammar, are ſuch as help to form or conjugate others; that is, are prefixed to them, to form or denote the moods or tenſes thereof. As *to have* and *to be*, in the Engliſh; *eſtre* & *avoir* in the French; *ho* & *ſono* in the Italian, &c.

In the engliſh language, the auxiliary verb *am*, ſupplies the want of paſſive verbs. See the article PASSIVE.

AUXILIUM, in law, the ſame with aid. See the article AID.

AUXILIUM CURIÆ, in law, a precept or order of court, to cite, or convene one party at the ſuit of another.

AUXILIUM *ad filium militem faciendum, vel filiam maritandam*, a precept, or writ directed to the ſheriff of every county where the king, or other lords had any tenants, to levy of them reaſonable aid, towards the knighting his eldeſt ſon, or the marriage of his eldeſt daughter. See the article AID.

AUXONE, a ſmall city of Burgundy, in France, ſituated on the river Soane, about ſeven miles weſt of Dole, in 5° 22′ eaſt longitude, and 47° 15′ north latitude.

AWARD, in law, the judgment of an arbitrator, or of one who is not appointed by the law a judge, but choſen by the parties themſelves for terminating their difference. See the article ARBITRATOR.

AWK, in ornithology, the ſame with the alce or razor-bill. See RAZOR-BILL.

AWL, or AUL, among ſhoe-makers, an inſtrument wherewith holes are bored thro' the leather, to facilitate the ſtitching, or ſewing the ſame. The blade of the awl is uſually a little flat and bended, and the point ground to an acute angle.

AWME, or AUME, a dutch liquid meaſure, containing eight ſteckans, or twenty verges or verteels, equal to the tierce in England, or to one-ſixth of a ton of France.

AWN, *ariſta*, in botany. See ARISTA.

AWNING, in the ſea-language, is the hanging a ſail, tarpauling, or the like, over any part of the ſhip, to keep off the ſun, rain, or wind.

AX, *ſecuris*, among carpenters, an inſtrument wherewith to hew wood.

This implement differs from the joiners hatchet, as being deeper and heavier.

AX, AXLE, or AXIS. See AXIS.

AXBRIDGE, a market town of Somerſetſhire, ſituated about eight miles north-weſt of Wells, in 3° weſt longitude, and 51° 30′ north latitude.

AXEL, a ſmall fortified town of dutch Flanders, ſituated about twenty miles weſt of Antwerp, in 3° 40′ eaſt longitude, and 51° 20′ north latitude.

AXILLA, in anatomy, the arm-pit, or the cavity under the upper part of the arm.

AXILLA, in botany, the ſpace comprehended betwixt the ſtems of plants and their leaves.

AXILLARY, *axillaris*, ſomething belonging to, or laying near the axilla. Thus,

AXILLARY ARTERY is that part of the ſubclavian branches of the aſcending trunk of the aorta, which paſſeth under the arm-pits. See the article ARTERY.

AXILLARY GLANDS are ſituated under the arm-pits, enveloped in fat, and lie cloſe by the axillary veſſels.

AXILLARY VEIN, one of the ſubclavian veins which paſſes under the arm-pit, dividing itſelf into ſeveral branches, which are ſpread over the arm. See VEIN.

AXIM, a town on the gold coaſt of Guinea, where the Dutch have a fort and factory called St. Anthony: weſt longitude, 4°, and north latitude 5°.

AXIOM, in philoſophy, is ſuch a plain, ſelf-evident, and received notion, that it cannot be made more plain and evident by demonſtration; becauſe it is itſelf better known than any thing that can be brought to prove it: as, that nothing can act where it is not; that a thing cannot be, and not be, at the ſame time; that the whole is greater than a part thereof; and that from nothing, nothing can ariſe. By axioms, called alſo maxims, are underſtood all common notions of the mind, whoſe evidence is ſo clear and forcible, that a man cannot deny them, without renouncing common ſenſe and natural reaſon.

The rule whereby to know an axiom, is this: whatever propoſition expreſſes the immediate clear compariſon of two ideas, without the help of a third, is an axiom. But if the truth does not appear from the immediate compariſon of two ideas, it is no axiom.

Theſe ſort of propoſitions, under the name of axioms, have, on account of their being ſelf-evident, paſſed not only for principles of ſcience, but have been ſuppoſed innate, and thought to be the foundation of all our other knowledge; though, in truth, they are no more than identic propoſitions: for to ſay that all right angles are equal to each other, is no more than ſaying, that all right angles are right angles, ſuch equality being implied in the very definition. All conſideration of theſe maxims, therefore, can add nothing to the evidence or certainty of our knowledge of them: and how little they influence the reſt of our knowledge, how far they are from being the foundation of it, as well as of the truths firſt known to the mind, Mr. Locke, and ſome others, have undeniably proved.

According to Bacon, it is impoſſible that axioms raiſed by argumentation ſhould be uſeful in diſcovering new works; becauſe the ſubtilty of nature far exceeds the ſubtilty of arguments: but axioms, duly and methodically drawn from particulars, will again eaſily point out new particulars, and ſo render the ſciences active.

The axioms in uſe being derived from ſlender experience, and a few obvious particulars, are generally applied in a correſponding manner. No wonder, therefore, they lead us to few particulars; and if any inſtance, unobſerved before, happen to turn up, the axiom is preſerved by ſome trifling diſtinction, where it ought rather to be corrected.

AXIOM is alſo an eſtabliſhed principle in ſome art or ſcience.

Thus it is an eſtabliſhed axiom in phyſics, that nature does nothing in vain; ſo it is in geometry, that if to equal things you add equals, the ſums will be equal. It is an axiom in optics, that the angle of incidence is equal to the angle of reflection, &c. In which ſenſe too, the general laws of motion are called axioms: whence it may be obſerved, that theſe particular axioms are but deductions from certain hypotheſes.

AXIS, in geometry, the ſtraight line in a plane figure, about which it revolves, to produce or generate a ſolid: thus, if a ſemi-circle be moved round its diameter at reſt, it will generate a ſphere, the axis of which is that diameter.

AXIS, in aſtronomy. 1. Axis of the world, an imaginary right line conceived to paſs through the center of the earth from one pole to the other, about which the ſphere of the world in the ptolemaic ſyſtem revolves in its diurnal rotation. 2. The axis of a planet, is that line drawn

through the center about which the planet revolves. The ſun, together with all planets, except Mercury and Saturn, are known by obſervation to move about their reſpective axes. The axis of the earth, during its revolution round the ſun, remains always parallel to itſelf, and is inclined to the plane of the ecliptic, making with it an angle of 66½ degrees. See the articles PARALLELISM, INCLINATION, *&c.*

3. The axis of the equator, horizon, ecliptic, zodiac, *&c.* are right lines drawn through the centers of thoſe circles perpendicular to their planes. See the articles EQUATOR, HORIZON, *&c.*

AXIS, in conic-ſections, a right line dividing the ſection into two equal parts, and cutting all its ordinates at right angles. Thus, if AP (plate XXIV. fig. 4. N°. 1.) be drawn ſo as to cut the ordinate MN at right angles, and divide the ſection into two equal parts, then is the line AP the axis of the ſection. The tranſverſe, firſt, or principal axis of an ellipſis or hyperbola, is the axis AP, which in the ellipſis *(ibid.* N°. 2.) is the longeſt, and in the hyperbola *(ibid.* N°. 3.) cuts the curves in the points A and P. The conjugate, or ſecond axis of an ellipſis, is the line EF *(ibid.* N°. 2.) drawn through the center C, parallel to the ordinate MN, and perpendicular to the tranſverſe axis AP, being the ſhorter of the two, and terminated by the curve. The conjugate axis of an hyperbola is the right line EF *(ibid.* N°. 3. drawn thro' the center C, parallel to the ordinates MN, MN, and perpendicular to the traverſe axis AP. This axis, tho' more than infinite, is of a determinate length, and may be found by this proportion. As $\overline{AM} \times \overline{PM} : AP^2 :: MN^2 : EF^2$. The axis of the parabola is of an indeterminate length. This axis of the ellipſis is determinate. In the ellipſis and hyperbola, there are two axes, and no more; and, in the parabola, only one.

AXIS, in mechanics. The axis of a ballance is that line about which it moves, or rather turns about. Axis of oſcillation is a right line parallel to the horizon, paſſing through the center about which a pendulum vibrates. See the articles BALLANCE and PENDULUM.

AXIS IN PERITROCHIO, one of the five mechanical powers, conſiſting of a peritrochium or wheel concentric with the baſe of a cylinder, and moveable together with it about its axis. The power is applied at the circumference of the wheel, and the weight is raiſed by a rope that is gathered up on the axis while the machine turns round. The power may be conceived as applied at the extremity of the arm of a lever, equal to the radius of the wheel; and the weight as applied at the extremity of a lever, equal to the radius of the axis; only thoſe arms do not meet at one center of motion, as in the lever, but in place of this center, we have an axis of motion, *viz.* the axis of the whole machine. See LEVER.

But as this can produce no difference, it follows, that the power and weight are *in æquilibrio*, when they are to each other inverſely as the diſtances of their directions from the axis of the engine; or when the power is to the weight as the radius of the roller to the radius of the wheel; the power being ſuppoſed to act in a perpendicular to this radius. But if the power act obliquely to the radius, ſubſtitute a perpendicular from the axis on the direction of the power, in the place of the radius, thus. If ABDE (plate XXIV. fig. 5.) repreſent the cylindric roller, HPN the wheel, LM the axis or right line, upon which the whole engine turns, Q the point of the ſurface of the roller, where the weight W is applied, P the point where the power is applied, KQ the radius of the roller, CP the radius of the wheel; then if the power P act with a direction perpendicular to CP, the power and weight will ſuſtain each other, when P is to W as KQ to CP or CH: but if the power act in any other direction PR, let CR be perpendicular from C the center of the wheel on that direction; then P and W will ſuſtain each other, when P is to W as KQ to CR; becauſe, in this caſe, a power P has the ſame effect, as if it was applied to the point R of its direction, acting in a right line perpendicular to CR.

The uſe of this machine is to raiſe weights to a greater heighth than the lever can do; becauſe the wheel is capable of being turned ſeveral times round, which the lever is not; and alſo to communicate motion from one part of a machine to another. Accordingly, there are few compound machines without it.

AXIS, in optics, is that ray, among all others that are ſent to the eye, which falls perpendicularly upon it, and which conſequently paſſes through the center of the eye.

Common

Common or mean axis, is a right line drawn from the point of concourſe of the two optic nerves, thro' the middle of the right line, which joins the extremity of the ſame optic nerves.

Axis of a glaſs or lens, is a right line joining the middle points of the two oppoſite ſurfaces of the glaſs.

Axis of incidence, in dioptrics, is a right line perpendicular in the point of incidence, to the refracting ſuperficies, drawn in the ſame medium that the ray of incidence comes from.

Axis of refraction is a right line drawn thro' the refracting medium, from the point of refraction, perpendicular to the refracting ſuperficies.

AXIS, in architecture. Spiral axis, is the axis of a twiſted column drawn ſpirally, in order to trace the circumvolutions without. See the article COLUMN.

Axis of the ionic capital, is a line paſſing perpendicularly through the middle of the eye of the volute. See the articles CAPITAL and VOLUTE.

Axis of a veſſel is an imaginary right line, paſſing through the middle of it perpendicularly to its baſe, and equally diſtant from its ſides.

AXIS, in anatomy, the ſecond vertebra of the neck, ſo called from the head's turning on it like an axis.

AXLE, or AXLE-TREE, the ſame with axis. See the article AXIS.

AXMINSTER, a market town of Devonſhire, ſituated about twenty-two miles eaſt of Exeter, in 3° 15′ weſt longitude, and 50° 40′ north latitude.

AXUMA, a city of Ethiopia, in Africa, ſituated in 38° eaſt longitude, and 15° north latitude.

AXUNGIA, in a general ſenſe, denotes old lard, or the drieſt and hardeſt of any fat in the bodies of animals: but, more properly, it ſignifies only hog's lard.

Phyſicians make uſe of the axungia of the gooſe, the dog, the viper, and ſome others, eſpecially that of man, which is held by ſome to be of extraordinary ſervice in the drawing and ripening of tumours.

AXUNGIA VITRI, ſandiver, or ſalt of glaſs, a kind of ſalt which ſeparates from the glaſs while it is in fuſion. It is of an acrimonious and biting taſte: the farriers uſe it for clearing the eyes of horſes; it is alſo made uſe of for cleanſing the teeth; and it is ſometimes applied to running ulcers, the herpes, or the itch, by way of deſiccative.

AXYRIS, in botany, a genus of the monoecia triandria claſs of plants, in the male flowers of which the calyx is a perianthium compoſed of four patent, obtuſe leaves, divided into three ſegments: there is no corolla: In the female flowers the calyx is compoſed of five obtuſe, concave, connivent, and permanent, leaves, with the two exterior ones ſhorter than the reſt: there is no corolla; nor is there any pericarpium; the ſeed is ſingle, oblong, compreſſed, obtuſe, and contained in the cup.

AYAMONTE, a ſea-port town of Andaluſia in Spain, ſituated near the mouth of the river Guadiana, in 8° 5′ weſt longitude, and 37° north latitude.

AYEL, in law, a writ which lies where the grandfather was ſeized in his demeſne the day he died, and a ſtranger enters the ſame day and diſpoſſeſſes the heir.

AYMOUTH, or EYMOUTH. See the article EYMOUTH.

AYRY, or AERY of hawks, a neſt or company of hawks ſo called from the old french word *aire*, which ſignified the ſame. See the article HAWK.

AZALEA, in botany, a genus of the *pentandria monogynia* claſs of plants, the flower of which conſiſts of a ſingle petal, divided at the ſummit into five ſegments: the fruit is a roundiſh capſule, formed of five valves, and containing as many cells: the ſeeds are numerous and roundiſh.

AZAZEL, the ſcape-goat, in jewiſh antiquity. See the article SCAPE-GOAT.

AZIMUTH, in aſtronomy, an arch of the horizon, intercepted between the meridian of the place and the azimuth, or vertical circle paſſing thro' the center of the object, which is equal to the angle of the zenith formed by the meridian and vertical circle: or it is found by this proportion, As the radius to the tangent of the latitude of the place, ſo is the tangent of the ſun's or ſtar's altitude, for inſtance, to the co-ſine of the azimuth from the ſouth, at the time of the equinox. To find the azimuth by the globe, ſee the article GLOBE.

Magnetical AZIMUTH, an arch of the horizon, intercepted between the azimuth, or vertical circle paſſing through the center of any heavenly body, and the magnetical meridian.

This is found by obſerving the object with an azimuth compaſs.

AZIMUTH-COMPASS, an inſtrument adapted to find, in a more accurate manner than by the common ſea-compaſs, the

ſun

ſun or ſtar's magnetical amplitude, or azimuth. See a deſcription of this compaſs under the article *Azimuth*-COMPASS.

AZIMUTH-DIAL, one whoſe ſtyle or gnomen is at right angles to the plane of the horizon.

AZIMUTH-CIRCLES, called azimuths, or vertical circles, are great circles of the ſphere, interſecting each other in the zenith and nadir, and cutting the horizon at right angles in all the points thereof.

The horizon being divided into 360°, they uſually conceive 360 azimuths.

Theſe azimuths are repreſented by the rhumbs on common ſea-charts, and on the globe they are repreſented by the quadrant of altitude when ſcrewed in the zenith. On theſe azimuths is reckoned the height of the ſtars, and of the ſun when not in the meridian.

AZOGA SHIPS, are thoſe ſpaniſh ſhips commonly called the quick-ſilver ſhips, from their carrying quickſilver to the ſpaniſh Weſt-Indies, in order to extract the ſilver out of the mines of Mexico and Peru. Theſe ſhips, ſtrictly ſpeaking, are not to carry any goods unleſs for the king of Spain's account.

AZONI, ἄζωνοι, in antient mythology, a name applied by the Greeks to ſuch of the gods as were deities at large, not appropriated to the worſhip of any particular town or country, but acknowledged in general by all countries, and worſhipped by every nation. Theſe the Latins called *dii communes*. Of this ſort were the Sun, Mars, Luna, *&c.*

AZORES, iſlands in the atlantic ocean, between 25° and 33° weſt longitude, and between 36° and 40° north latitude.

They belong to the Portugueſe, and are ſometimes called the weſtern iſles, as lying weſtward of Europe.

AZOTH, in antient chemiſtry, the firſt matter of metals, or the mercury of a metal; more particularly, that which alchemiſts call the mercury of philoſophers, and which they pretend to draw from all ſorts of metallic bodies.

The azoth of Paracelſus, which he boaſted of as an univerſal remedy, is pretended to be a preparation of gold, ſilver, and mercury.

AZURE, in a general ſenſe, the blue colour of the ſky. See SKY and BLUE.

AZURE, among painters, the beautiful blue colour, with a greeniſh caſt, prepared from the lapis lazuli, generally called ultramarine.

With greater propriety, however, azure ſignifies that bright blue colour prepared from the lapis armenus, a different ſtone from the lapis lazuli, though frequently confounded together. This colour is, by our painters, commonly called Lambert's blue.

AZURE, in heraldry, the blue colour in the arms of any perſon below the rank of a baron. In the eſcutcheon of a nobleman, it is called ſaphire; and in that of a ſovereign prince, Jupiter. In engraving, this colour is expreſſed by lines, or ſtrokes drawn horizontally. See plate XXI. fig. 2.

AZURIUM, the name of a chemical preparation from two parts of mercury, one of ſulphur, and a fourth of ſal ammoniac, mixed in a mortar, put into a glaſs veſſel, and ſet over the fire till a bluiſh ſmoke ariſes, *&c.*

AZYGOS, in anatomy, a vein ariſing within the thorax on the right ſide, having no fellow on the left; whence it is called azygos, or vena ſine pari.

It is extended through the right ſide of the cavity of the thorax, and being deſcended to the eighth or ninth vertebra, it then begins to keep the middle, and ſends forth on each ſide intercoſtal branches to the interſtices of the eight loweſt ribs; being then divided into two branches, of which the larger deſcends to the left, betwixt the proceſſes of the diaphragm, and is inſerted ſometimes into the cava, above or below the emulgent, but oftener joined to the emulgent itſelf. The other, which goes down on the right ſide, enters the cava, commonly a little above the emulgent, but is very ſeldom joined to the emulgent itſelf.

AZYMITES, *azymitæ*, in church-hiſtory, chriſtians who adminiſter the euchariſt with unleavened bread. This is an appellation given to the latin by the greek church, who alſo call the armenians and maronites, who uſe unleavened bread in their office, by the name of azymites. See the next article.

AZYMOUS, ἄζυμος, ſomething unfermented, as bread, *&c.* made without leaven.

This term has occaſioned frequent diſputes, and, at length, a rupture between the latin and the greek churches; the former of which maintain, that the bread in the maſs ought to be azymous, unleavened, in imitation of the paſchal bread of the jews, and of our ſaviour, who inſtituted the ſacrament on the day of

of the paſſover. The latter as ſtrenuouſly maintain the contrary from tradition, and the common uſage of the church.

It is related, that during the firſt ages of the church, none but unleavened bread was uſed in the euchariſt, till ſuch time as the Ebionites aroſe, who held, that all obſervances preſcribed by Moſes, were ſtill in force. Upon which both the eaſtern and weſtern churches took up the uſe of leavened bread; and after the extinction of that hereſy, the weſtern church, returned to the azymous, the eaſtern obſtinately adhering to the former uſage.

It is obſerved by Galen, that all unfermented bread is very unwholeſome.

B.

B, The ſecond letter of the alphabet, and firſt conſonant, is ſuppoſed, in its pronunciation, to reſemble the bleating of a ſheep.

It is formed in the voice by a ſtrong and quick expreſſion of the breath, and opening of the lips; and is therefore one of the labials: as a mute, it hath a middle power between the ſmooth ſound of P, and the rougher ſound of F, and V.

B is alſo uſed as an abbreviation: thus, in muſic, B ſtands for the tone above A, as B♭, or ♭B, does for B flat, or the ſemitone major above A: B alſo ſtands for baſs, and B. C. for *baſſo continuo*, or thorough baſs. As a numeral, B was uſed by the Greeks and Hebrews, to denote 2: but among the Romans, for 300, and with a daſh over it (thus $\overline{B}$) for 3000. The ſame people likewiſe uſed B. for Brutus, B. F. for *bonum factum*. B and V are uſed indifferently for each other, as *febum* and *fevum*: ſo alſo B and P, as *Publicola* and *Poplicola*; and B and F, as *Bubalus* and *Bufalus*. B, in the chemical alphabet, ſignifies Mercury. B. A. ſtands for batchelor of arts; B. L. for batchelor of laws; and B. D. for batchelor of divinity. B. is ſervile in the inflection of the dative and ablative plural of the third, fourth, and fifth declenſion of latin nouns.

BABBLING, among ſportſmen, is ſaid of hounds which are too buſy, after they have found a good ſcent.

BABELMANDEL, a little iſland at the entrance of the Red-ſea, from the indian ocean; from whence the ſtraits of Babelmandel take their name.

BABOON, in zoology, a large kind of ape, common in the Eaſt and Weſt Indies. The head is large, and the mouth in a particular manner furniſhed with whiſkers, the face is naked, but the back part of the head hairy. It has a very ſhort tail, and is of a dark olive-colour. See the article SIMIA.

BABYLON, a celebrated city of antiquity, ſuppoſed to have been ſituated on the river Euphrates, though not on its preſent channel, in 44° eaſt longitude, and 32° north latitude. But of this once ſo flouriſhing a city, there are now no remains; nor even the place, where it ſtood, certainly known.

BABYLON was alſo an antient city of Egypt, ſuppoſed to have ſtood where Grand-Cairo does at preſent.

BABYLONISH, or BABYLONIAN, ſomething belonging, or peculiar to Babylon: thus, we meet with babylonian epocha, hour, *&c.* See the articles EPOCHA, HOUR, *&c.*

BABYLONICS, *Babylonica*, in literary hiſtory, a fragment of the antient hiſtory of the world, ending at 267 years before Chriſt; and compoſed by Beroſus or Beroſſus, a prieſt of Babylon, about the time of Alexander. Babylonics are ſometimes alſo cited in antient writers by the title of Caldaics. The Babylonics were very conſonant with ſcripture, as Joſephus, and the antient chriſtian chronologers aſſure; whence the author is uſually ſuppoſed to have conſulted the Jewiſh writings. Beroſus ſpeaks of an univerſal deluge, an ark, *&c.* He reckons ten generations between the firſt man and the deluge, and marks the duration of the ſeveral generations by *ſari*, or periods of 223 lunar months; which reduced to years, differ not much from the chronology of Moſes.

The Babylonics conſiſted of three books, including the hiſtory of the antient Babylonians, Medes, *&c.* but only a few imperfect extracts are now remaining of the work; preſerved chiefly by Joſephus, and

and Syncellus; where all the paſſages of citations of antient authors out of Beroſus are collected with great exactneſs. Annius of Viterbo kindly offered his aſſiſtance to ſupply the loſs, and forged a compleat Beroſus out of his own head. The world has not thanked him for the impoſture.

BABYROUSSA, in zoology, the indian hog. See the article HOG.

This is the ſus with two teeth growing on the forehead, and is a very extraordinary animal; it is of the bigneſs of our largeſt hogs, but leſs corpulent in proportion to its height; the moſt diſtinguiſhing character of this ſpecies of the hog, is a pair of exerted teeth in the lower jaw, not unlike thoſe of many other animals, and another pair in the upper jaw, which perforate the fleſh of the head, and ſtand forward in the manner of horns.

BACA, a town of Granada in Spain; ſituated about forty-eight miles north-eaſt of the city of Granada, in 3° weſt longitude, and 37° 30′ north latitude.

BACCA, BERRY, in botany, *&c.* See the article BERRY.

BACCASERAI, the capital city of Crim-Tartary, ſituated about eighty miles weſt of the ſtraits of Kaffa, in 35° eaſt longitude, and 45° 15′ north latitude.

BACCEM, or BAGIAIM, a ſea-port town of Cambaya, in the hither peninſula of India. It belongs to the Portugueſe, and is ſituated in 73° eaſt longitude, and 19° 20′ north latitude.

BACCHÆ, in antiquity, prieſteſſes of the god Bacchus. They were likewiſe called *mænades*, on account of the frantic ceremonies uſed in their feaſts; as alſo *thyades*, which ſignifies impetuous, or furious. They celebrated the orgies of their god, covered with ſkins of tygers and panthers, and running all the night, ſome with their hair looſe, with torches in their hands, others crowned with vine and ivy leaves, carrying the thyrſus. Along with them went cymbal-players, and drummers; while they themſelves, ſeized with enthuſiaſm, made hideous lamentations.

BACCHANALIA, feaſts celebrated in honour of Bacchus by the antient Greeks and Romans; of which the two moſt remarkable were called the greater and leſſer. The latter, called *lenæa*, from a word ſignifying a wine-preſs, were a preparation for the former, and were held in the open fields about autumn; but the greater, called Dionyſia, from one of the names of Bacchus, were celebrated in the city, about the ſpring-time. Both theſe feaſts were accompanied with games, ſpectacles, and theatrical repreſentations, and it was at this time, the poets contended for the prize of poetry. Thoſe who were initiated into the celebration of theſe feaſts, repreſented ſome Silenus; others, Pan; others, Satyrs; and in this manner appeared in public night and day, counterfeiting drunkenneſs, dancing obſcenely, committing all kinds of licentiouſneſs and debauchery; and running over the mountains and foreſts, with horrible ſhrieks and howlings, crying out, Εὐοῖ Βάκχε, *Evoe Bacche*, or Ἰὼ Βάκχε, *Io Bacche*. Livy informs us, that during the bacchanalian feaſts at Rome, ſuch ſhocking diſorders were practiſed under the cover of the night, and thoſe who were initiated were bound to conceal them by an oath attended with horrid imprecations, that the ſenate ſuppreſſed them firſt in Rome, and afterwards throughout all Italy.

BACCHARIS, a genus of plants of the *ſyngeneſia polygamia ſuperflua* claſs of Linnæus; the intire flower of which conſiſts of a mixture of hermaphrodite and female flowers. The hermaphrodite ones are monopetalous, of a funnel form, and divided into five ſegments; the female ones are ſcarce viſible. The cup incloſes ſolitary oblong ſeeds, crowned with ſimple down.

BACCHIUS, in antient poety, a kind of foot compoſed of a ſhort ſyllable, and two long ones, as the word ăvārī. It takes its name from the god Bacchus, becauſe it frequently entered into the hymns compoſed in his honour. The Romans called it likewiſe *ænotrius*, *tripodius*, *ſaltans*, and the Greeks παριαμβος.

BACCIFEROUS, an epithet added to the names of any trees, ſhrubs, or plants, that bear berries, as bryony, dwarf honey-ſuckle, lily of the valley, aſparagus, butcher's broom, night-ſhade, ſolomon's ſeal, and many others.

BACHELOR, or BATCHELOR. See the article BATCHELOR.

BACHERAC, a town of the palatinate of the Rhine, ſituated on the weſtern ſhore of that river, in 7° eaſt lon. and 50° north lat. It is remarkable for excellent wine, from thence called bacherac.

BACHIAN, one of the Molucca-iſlands, ſituated under the equator, in 125° eaſt longitude. It belongs to the Dutch.

BACHU, a ſeaport town of the province of

of Chirwan, or Shirvan, in Perſia. It is ſituated on the weſtern ſhore of the Caſpian ſea, in 49° eaſt lon. and 40° north lat.

BACK, *dorſum*, in anatomy. See DORSUM.

BACK, in the manege. To back a horſe, or mount a horſe, *a dos*, is to mount him bare-backed, or without a ſaddle. A weak-backed horſe is apt to ſtumble: ſuch a horſe defends himſelf with his back, is when he leaps and plays with his fillets, and doubles his reins, to incommode his rider.

BACK, among builders. See BAGUETTE.

BACK-NAILS. See the article NAILS.

BACKS *of a bip*. See the article HIP.

BACK-BONE, or SPINE. See SPINE.

BACK-GAMMON, an ingenious game played with dice and tables, to be learned only by obſervation and practice.

However, the following rules concerning it, cannot fail to be acceptable to our readers. In the firſt place, the men, which are thirty in number, being equally divided between the two gameſters, are placed thus, *viz.* two on the ace point, five on the ſide of your left hand table, three on the cinque, and five on the ace point of your right hand table; which are anſwered on the like points by your adverſary's men: or they may be diſpoſed thus, *viz.* two on the ace point, five on the double ſice or ſice-cinque point, three on the cinque point in your own tables, and five on the ſice point at home; which are to be anſwered by your adverſary.

The men being thus diſpoſed, be ſure to make good your trey and ace points; hit boldly, and come away as faſt as you can. When you come to bearing, have a care of making when you need not; and doublets now will ſtand you moſt in ſtead. If both bear together, he that is firſt off, without doublets, wins one: if both bear, and one goes off with doublets, he wins two. If your table be clear before your adverſary's men are come in, that is a back-gammon, which is three; but if you thus go off with doublets, it is four.

The great dexterity of this game, is to be forward, if poſſible, upon ſafe terms; and ſo to point the men, that it ſhall not be poſſible for the adverſary to paſs; though you have entered your men, till you give him liberty, after having got two to one of the advantage of the game.

BACK-STAFF, in the ſea-language, an inſtrument to take the ſun's altitude. It conſiſts of two arches, and three vanes: the arch *f g* (plate XXV. fig. 1.) contains commonly ſixty degrees, whence it is generally called the ſixty arch; and is numbered from *f* towards *g*; the other arch, *d e*, contains thirty degrees, or the complement of the former, being numbered from *e* towards *d*. On the ſurface of this arch are deſcribed twelve concentric circles, whereby each degree, by the help of diagonal lines, is divided into 12 equal parts, and conſequently the altitude may be obtained to five minutes. The ſight vane A is a piece of wood or braſs, of about three inches long and one broad, and is fitted to ſlide on the arch *d e*; in the middle of this vane is drilled a fine hole, through which both the ſolar ſpot, or ſhadow, and horizon are to be viewed at the time of obſervation. The horizon vane B is of about the ſame length and breadth as the former; and at the time of obſervation is fixed at B; it has a ſlit cut through it of about an inch long, and a quarter of an inch broad, through which the horizon is to be obſerved. The ſhade vane C is fitted to the arch *d e*, and has generally a convex lens ſet therein, which caſts the ſolar ſpot on the horizon vane at the time of obſervation, being one of the many inventions of the celebrated Mr. Flamſteed.

To find the ſun's altitude by this inſtrument: fix the ſhade vane C on the 60° arch, at about 15 or 20 degrees leſs than the complement of the altitude, and turning your back towards the ſun, move the ſight vane A up and down the arch *d e*, till the ſun's image fall on the horizon vane B, and at the ſame inſtant you ſee the horizon through the ſlit in the horizon vane; then will the degrees cut by the ſhade vane C, on the arch *f g*, being added to thoſe cut by the ſight vane A, on the arch *d e*, be the ſun's zenith diſtance at that time, which being ſubtracted from 90 degrees, will give his altitude. But to obtain the ſun's greateſt altitude, or altitude when he is in the meridian (which is required in finding the latitude) continue obſerving, and as the ſun approaches the meridian, the ſea will appear through the ſlit in the horizon vane, and then muſt the ſlit vane be removed lower. And thus continue obſerving, till the ſun be in the meridian, and, as ſoon as he begins to decline, the ſky will appear through the ſlit in the horizon vane, when your obſervation will be finiſhed, and the degrees on the ſixty arch, being added to thoſe on the thirty arch, will give the complement of the ſun's meridian altitude

titude or zenith diſtance, as before. This inſtrument, commonly called Davis's quadrant, from the name of the inventor, and by the French, the engliſh quadrant, is not ſo accurate as could be wiſhed; and a large heavy braſs aſtrolabe is to be preferred before it. See the articles ASTROLABE and QUADRANT.

BACK-STAYS *of a Ship*, are ropes belonging to the main-maſt and fore-maſt, and the maſts belonging to them; ſerving to keep them for pitching forwards or overboard. See the article STAY.

BACK-WORMS, in falconry. See the article FILANDERS.

BACKBERINDE, in law, ſignifies the bearing upon the back, or about a perſon; being a circumſtance of theft apparent, for which a foreſter may arreſt an offender in the foreſt againſt vert and veniſon.

BACKING a colt or horſe. See HORSE.

BACULE, in fortification, a kind of portcullis, or gate, made like a pit-fall with a counterpoiſe, and ſupported by two great ſtakes. It is uſually made before the corps de guard, not far from the gate of a place.

BACULOMETRY, the art of meaſuring acceſſible, or inacceſſible heights, by the help of one or more baculi, ſtaves, or rods.

BACULUS DIVINATORIUS. See the article VIRGULA DIVINA.

BADAJOX, a large fortified town of ſpaniſh Eſtremadura, ſituated on the river Guadiana, in 7° 20′ weſt longitude, and 38° 45′ north latitude.

BADALON, a town of Catalonia, in Spain, ſituated on the Mediterranean, about ten miles eaſt of Barcelona, in 2° 15′ eaſt longitude, and 41° 15′ north latitude.

BADEN, the name of ſeveral towns: 1. Of one about twenty miles north of Straſburgh, capital of the margravate of the ſame name, and remarkable for its hot baths. 2. Of another town of Swabia, in the Briſgow; where are likewiſe ſeveral hot baths. 3. Of one in Switzerland, about fourteen miles north-weſt of Zurich. 4. Of one in the circle of Auſtria, about fifteen miles ſouth of Vienna.

BADENOCH, an inland country of Inverneſs-ſhire, in Scotland, lying between Aberdeen-ſhire and Lochaber.

BADGER, *meles*, in zoology. See MELES.

BADGER, in old law-books, one that was licenced to buy corn in one place, and carry it to another to ſell, without incurring the puniſhment of an ingroſſer.

BADIAGA, a water-plant reſembling the alcyoniums, but full of ſmall round granules, like ſeeds. Linnæus makes it a ſpecies of ſpunge. See SPONGIA.

It is a native of the northern kingdoms of Europe, and is ſaid to be good for removing the livid marks from blows.

BADIS, a fortreſs of Livonia, ſubject to Ruſſia, and ſituated twenty miles weſt of Revel, in 23° eaſt lon. and 59° 15′ north latitude.

BÆCKEA, in botany, a genus of the octandria monogynia claſs of plants, the calyx of which is a permanent perianthium, conſiſting of a ſingle funnel-ſhaped leaf, cut into five ſegments at the brim; the corolla conſiſts of five roundiſh ſpreading petals inſerted into the cup: the pericarpium is a globoſe capſule, made up of four valves, and containing four cells, in which are a few roundiſh angular ſeeds.

BÆTYLIA, βαιτυλια, anointed ſtones, worſhipped by the Phœnicians, by the Greeks before the time of Cecrops, and by other barbarous nations. They were commonly of a black colour, and conſecrated to ſome god, as Saturn, Jupiter, the Sun, &c.

Some are of opinion, that the true original of theſe idols is to be derived from the pillar of ſtone which Jacob erected at Bethel.

BÆZA, or BAEZA, a large city of Andaluſia in Spain, ſituated on the river Guadalquivir, in 3° 15′ weſt longitude, and 37° 40′ north latitude.

BAFFETAS, or BASTAS, a cloth made of coarſe white cotton thread, which comes from the Eaſt Indies. Thoſe of Surat are the beſt.

BAFFIN's BAY, a gulph of north America, running north-eaſt from cape Farewell in weſt Greenland, from 60° north latitude to 80°.

BAG, in commerce, a term ſignifying a certain quantity of ſome particular commodity; as a bag of almonds, for inſtance, is about three hundred weight; of aniſe-ſeeds, from three to four hundred, &c.

Bags are uſed in moſt countries, to put ſeveral ſorts of coin in, either of gold, ſilver, braſs, or copper. Bankers, and others who deal much in current caſh, label their bags of money, by tying a ticket or note at the mouth of the bag, ſignifying the coin therein contained, the ſum total, its weight, and of whom it was received. Tare is allowed for the bag.

BAG, among farriers, is when, in order to retrieve a horſe's loſt appetite, they put an ounce of aſa fœtida, and as much powder of ſavin, into a bag, to be tied to the bit, keeping him bridled for two hours, ſeveral times a day: as ſoon as the bag is taken off, he will fall to eating. The ſame bag will ſerve a long time.

BAG is alſo uſed compounded with other words, as oil-bag, petty-bag, ſand-bags, *&c.* See the articles OIL, PETTY, *&c.*

BAGDAT, a ſtrong town of Turky, on the frontiers of Perſia, ſituated on the river Tigris, in the province of Iracarabic; it was formerly capital of the ſaracen empire, and lies in 43° eaſt longit. and 33° 20′ north latitude.

BAGGAGE, in military affairs, denotes the cloaths, tents, utenſils of divers ſorts, proviſions, and other neceſſaries belonging to an army.

Before a march, the waggons with the baggage are marſhalled according to the rank which the ſeveral regiments bear in the army; being ſometimes ordered to follow the reſpective columns of the army, ſometimes to follow the artillery, and ſometimes to form a column by themſelves. The general's baggage marches firſt; and each waggon has a flag, ſhewing the regiment to which it belongs.

BAGGING *of hops*, the putting them in bags. See the article HOPS.

BAGNAGAR, the capital of Golconda, in the hither peninſula of India, formerly the reſidence of the kings of Golconda, now ſubject to the mogul: in eaſt long. 77° 30′, and north latitude 16° 30′.

BAGNIALUCK, a large city of Boſnia, in european Turkey, ſituated in 18° 15′ eaſt longitude and 44° north latitude.

BAGNIO, an italian word, ſignifying a bath: we uſe it for a houſe with conveniences for bathing, cupping, ſweating, and otherwiſe cleanſing the body; and ſometimes for worſe purpoſes.

BAGNIO is, in Turky, become a general name for the priſons where their ſlaves are incloſed, it being uſual in theſe priſons to have baths.

BAGNOLIANS, BAGNOLENSES, in church-hiſtory, a ſect of heretics, who in reality were manichees, though they ſomewhat diſguiſed their errors. They rejected the Old Teſtament, and part of the New; held the world to be eternal, and affirmed that God did not create the ſoul when he infuſed it into the body.

BAGPIPE, a muſical inſtrument of the wind kind, chiefly uſed in country places, eſpecially in the north: it conſiſts of two principal parts; the firſt a leathern bag, which blows up like a foot-ball, by means of a port-vent, or little tube, fitted to it, and ſtopped by a valve; the other part conſiſts of three pipes or flutes, the firſt called the great pipe, or drone; and the ſecond, the little one; which paſs the wind out only at the bottom: the third has a reed, and is played on by compreſſing the bag under the arm, when full, and opening or ſtopping the holes, which are eight, with the fingers. The little pipe is ordinarily a foot long; that played on, thirteen inches; and the port-vent ſix.

BAGUETTE, in architecture, a ſmall round moulding, leſs than an aſtragal, and ſo called from the reſemblance it bears to a ring.

BAHAMA, or LUCAYA-ISLANDS, a number of iſlands lying in the Atlantic ocean, between 21° and 27° north latitude, and between 73° and 81 weſt longitude.

Theſe iſlands, whereof twelve are of a conſiderable extent, take their name from Bahama, one of the largeſt of them, lying between 78° and 81° weſt longitude, and between 26° and 27° north latitude.

BAHAR, or BARRE, in commerce, weights uſed in ſeveral places in the Eaſt-Indies.

There are two of theſe weights, the one the great bahar, with which they weigh pepper, cloves, nutmegs, ginger, *&c.* and contains five hundred and fifty pounds of Portugal, or about five hundred and twenty-four pounds nine ounces avoirdupois weight. With the little bahar they weigh quickſilver, vermilion, ivory, ſilk, *&c.* It contains about four hundred and thirty-ſeven pounds nine ounces avoirdupois weight.

BAHAREN, an iſland in the perſian gulph, in 50° eaſt lon. and 26° north lat.

BAHIR, a hebrew term, ſignifying famous or illuſtrious; but particularly uſed for a book of the Jews, treating of the profound myſteries of the cabbala, being the moſt antient of their rabbinical works.

BAHUS, a city of Sweden, capital of a province of the ſame name, and ſituated about twenty miles north-weſt of Gottenburgh, in 11° eaſt longitude, and 58° 20′ north latitude.

BAJA, a town of Italy, in the kingdom of Naples, and province of Lavoro, ſituated in 14° 45′ eaſt long. 41° 6′ north lat.

BAJADOR, a cape on the weſt coaſt of Africa, in 15° weſt long. and 27° north latitude.

BAIL, in law, the ſetting at liberty one arreſted, or impriſoned, upon an action, either civil or criminal, upon ſureties taken for his appearance at a day and place aſſigned; and is either common or ſpecial.

Common bail is in actions of ſmall prejudice, or ſlight proof, in which caſe any ſureties are taken.

Special bail is that given in caſes of greater moment, where it is required that the ſureties be ſubſidy-men at leaſt, and according to the matter in queſtion.

It was ſome years ago enacted, that no perſon ſhould be held to ſpecial bail in any action brought for leſs than ten pounds: but this is only obſerved as to writs iſſued out of the courts of Weſtminſter-hall; for the marſhal's court continues to arreſt and hold to ſpecial bail in actions exceeding forty ſhillings.

By the indulgence of the common law, all perſons might be bailed till they were convicted of the offence laid to their charge: but it is enacted by ſtatute, that murderers, outlaws, houſe-burners, thieves openly defamed, ſhall not be bailed. However, this ſtatute does not extend to the court of the king's-bench, which bails in all caſes whatſoever, and may bail even for murder, *&c.*

Clerk of the BAILS is an officer belonging to the court of the king's-bench: he files the bail-pieces taken in that court, and attends for that purpoſe.

BAILE, or BALE, in the ſea-language. The ſeamen call throwing the water by hand, out of the ſhip or boat's hold, bailing. They alſo call thoſe hoops that bear up the tilt of a boat, its bails.

BAILMENT, in law, the delivery of things, whether writings or goods, to another, ſometimes to be delivered back to the bailer, that is, to him who ſo delivers them; ſometimes, to the uſe of him to whom they are delivered; and ſometimes, to a third perſon.

BAILIAGE, or BAILIWICK. See the article BAILIWICK.

Water-BAILIAGE, an antient duty paid to the city of London, for all goods brought into, or carried out of the port.

BAILIFF, an officer appointed for the adminiſtration of juſtice within a certain diſtrict, called a bailiwick.

BAILIFFS ERRANT, ſuch as are appointed by the ſheriff, to go up and down the county, to ſerve writs and warrants, ſummon county-courts, ſeſſions, aſſizes, and the like.

BAILIFFS *of franchiſes*, thoſe appointed by every lord within his liberty, to do ſuch offices therein, as the bailiff errant does at large in the county.

There are alſo bailiffs of foreſts, and bailiffs of manors, who direct huſbandry, fell trees, gather rents, pay quit rents, *&c.*

Water-BAILIFF, an officer appointed in all port-towns, for the ſearching of ſhips, gathering the toll for anchorage, *&c.* and arreſting perſons for debts, *&c.* on the water.

BAILIFF, however, is ſtill applied to the chief magiſtrate of ſeveral corporate towns. The government of ſome of the king's caſtles is alſo committed to perſons called bailiffs, as the bailiff of Dover caſtle.

In France, bailiffs have ſome conſiderable prerogatives: they are reputed heads of their reſpective diſtricts, or adminiſter juſtice by their lieutenants, at leaſt within the precincts of the ſeveral parliaments or provinces of France. In their name juſtice is adminiſtred, contracts and other deeds paſſed, and to them is committed the command of the militia.

In Scotland bailiff is the name of a judge, as well as the appellation of aldermen.

BAILIWICK, that liberty which is exempted from the ſheriff of the county, over which liberty the lord thereof appoints his own bailiff, with the like power within his precinct, as an under-ſheriff exerciſes under the ſheriff of the county: or it ſignifies the precinct of a bailiff, or the place within which his juriſdiction is terminated.

BAILO, thus they ſtile at Conſtantinople the embaſſador of the republic of Venice, who reſides at the porte. This miniſter, beſides his political charge, acts there the part of a conſul for Venice.

BAIOCCO, a copper coin, current at Rome, and throughout the whole ſtate of the church, ten of which make a julio, and an hundred a roman crown.

BAIRAM, in the mahometan cuſtoms, a yearly feſtival of the Turks, which they keep after the faſt of ramazan.

The mahometans have two bairams, the great and the little.

The little bairam holds for three days, and is ſeventy days after the firſt, which follows immediately the ramazan. During the bairam the people leave their work for three days, make preſents to one another, and ſpend the time with great manifeſtations of joy. If the day after ramazan ſhould prove ſo cloudy as to prevent the

the ſight of the new moon, the bairam is put off to the next day, when it is kept, even if the moon ſhould ſtill be obſcured. When they celebrate this feaſt, after numerous ceremonies, or rather ſtrange mimicries, in their moſque, it is concluded with a ſolemn prayer againſt the infidels, to extirpate chriſtian princes, or to arm them againſt one another, that they may have an opportunity to extend the borders of their law.

BAIT, in fiſhing, a thing prepared to take and bring fiſhes to.

Baits are of two ſorts, 1. The natural ones, or thoſe generally living, as maggots, bobs, frogs, &c. 2. Of the ſecond kind, are all artificial baits, whether ſuch as imitate the living baits, or paſtes of ſeveral compoſitions and figures.

Sheep's blood and cheeſe are good baits in April; the bobs dried, waſps, and bees, are for May; brown flies for June; maggots and hornets for July; ſnails in Auguſt; graſhoppers in September; corn and bramble-berries at the fall of the leaf: the red earth-worm is good for ſmall fiſh all the year round; and ſmall fiſh are good baits for pikes at all times.

There are ſeveral artificial baits for intoxicating of fowls, and yet without tainting or hurting their fleſh: for the greater ſort of land-fowls the bait may be made thus: take a peck, or a leſſer quantity of wheat, rye, &c. with which mix two handfuls of nux vomica; boil them together till they are almoſt ready to burſt; ſtrew them upon the land, where you deſign to take the fowl, and ſuch as eat thereof will be intoxicated, and lie as if dead: ſmall birds may be taken, with only this alteration; inſtead of wheat, or the like grain, take hemp-ſeed, &c.

BAITING, in falconry, is when a hawk flutters with her wings, either from perch or fiſt, as if it were ſtriving to get away.

BAITING alſo denotes the act of ſmaller, or weaker beaſts attacking, and harraſſing greater and ſtronger ones. In this caſe, we hear of the baiting of bulls and bears by maſtiff or bull dogs, with ſhort noſes, that they may take the better hold. Whales are baited by a kind of fiſh called *oriæ* or *killers*; ten or twelve of which will attack a young whale at once, and not leave him till he is killed.

Houghton gives us the hiſtory of bull-baiting, a ſport peculiar to England, and ſavouring, like ſome others, of our antient gothiciſm. Some of our countrymen are ſaid to be fond enough of it, to buy bulls on purpoſe, and travel with them, at great charge, to all the chief towns around. Policy, in ſome caſes, enjoins bull-baiting. This animal is rarely killed without being firſt baited; the chaffing and exerciſe whereof makes his fleſh tenderer and more digeſtible. In reality, it diſpoſes it for putrefaction; ſo that, unleſs taken in time, baited fleſh is ſoon loſt. But a ſpirit of barbariſm had the greateſt ſhare in ſupporting the ſport: bulls are kept on purpoſe, and exhibited as ſtanding ſpectacles for the public entertainment. The poor beaſts, have not fair play; they are not only tied down to a ſtake, with a collar about their necks, and a ſhort rope, which gives them not above four or five yards play, but they are diſarmed too, and the tips of their horns cut off, or covered with leather, to prevent their hurting the dogs. In this ſport, the chief aim of the dog is to catch the bull by the noſe, and hold him down; to which end, he will even creep on his belly: the bull's aim, on the contrary, is, with equal induſtry, to defend his noſe; in order to which, he thruſts it cloſe to the ground, where his horns are alſo in readineſs to toſs the dog.

BAJULUS, an antient officer in the court of the greek emperors.

There were ſeveral degrees of bajuli, as the grand bajulus, who was preceptor to the emperor, and the ſimple bajuli, who were ſub-preceptors.

BAKAL a great lake, in the middle of Siberia, on the road from Moſcovy to China.

BAKER, a perſon whoſe occupation or buſineſs it is to bake bread. See the articles BAKING and BREAD.

The Bakers of London make a diſtinct company, the nineteenth in order.

BAKEWELL, a large market-town of Derbyſhire, about one hundred and fifty miles from London. It is a good market for lead.

BAKING, the art of preparing bread, or reducing meals of any kind, whether ſimple or compound, into bread.

The various forms of baking among us may be reduced into two, the one for leavened, the other for unleavened bread; for the firſt, the chief is manchet-baking, the proceſs whereof is as follows:

The meal, ground and boulted, is put into a trough, and to every buſhel are poured in about three pints of warm ale, with barm and ſalt to ſeaſon it; this is kneaded well together, with the hands

through

through the brake; or for want thereof, with the feet, through a cloth; after which, having lain an hour to ſwell, it is moulded into manchets, which ſcotched in the middle, and pricked at top, to give room to riſe, are baked in the oven by a gentle fire.

For the ſecond, ſometimes called cheat-bread-baking, it is thus: ſome leaven (ſaved from a former batch) filled with ſalt, laid up to ſour, and at length diſſolved in warm water, is ſtrained through a cloth into a hole made in the middle of the heap of meal in the trough; then it is worked with ſome of the flour into a moderate conſiſtence; this is covered up with meal, where it lies all night, and in the morning the whole heap is ſtirred up, and mixed with a little warm water, barm, and ſalt, by which it is ſeaſoned, ſoftened, and brought to an even leaven: it is then kneaded, moulded, and baked, as before.

BAKING *of porcelain*. See PORCELAIN.

BALA, in geography, a market town of Merionethſhire, about ſixteen miles ſouth from Denbigh, in 3° 40′ weſt longitude and 52° 55′ north latitude.

BALÆNA, the WHALE, in zoology, a genus of fiſhes, of the order of the *plagiuri*, diſtinguiſhed by having certain laminæ, of a horny ſubſtance, in the upper jaw, which ſupply the place of teeth, and uſually no fin upon the back: to this it may be added, that the fiſtula, or aperture for the diſcharge of water, is double, and ſituated either on the forehead, in the middle of the head, or in the roſtrum. See the article WHALE.

The horny laminæ make the ſubſtance which we call whale-bone.

BALAGNA, a town of Muſcovy, in the province of Novogorod, ſituated on the river Wolga, in 45° eaſt long. and 56° 30′ north latitude.

BALAGUER, a city of Catalonia, in Spain, in 30′ eaſt long. and 41° 30′ north lat.

BALANCE, or BALLANCE. See the article BALLANCE.

BALANI, MARINI, certain multivalve ſhells, uſually growing in cluſters on the ſhells of the larger ſort of the ſea ſhell-fiſh: ſometimes they are found large, looſe, and petrified, at a great diſtance from the ſea; in which ſtate they are diſtinguiſhed by the name *balanitæ*.

The balanus is a ſea-ſhell fiſh, of an oblong figure, approaching to that of an acorn, open at the mouth or top, and compoſed of ſeveral portions, or valves, from ſix to twelve in number, not moveable or looſe, as in the other bivalve or multivalve ſhells, but fixed to one another by an intermediate ſubſtance: the animal inhabiting this ſhell is called a triton. See TRITON.

BALANUS, in anatomy, a term ſometimes uſed for the glans penis, as well as for the clitoris.

BALANUS, in pharmacy, denotes a ſuppoſitory. See the article SUPPOSITORY.

BALAUSTINE, *balauſtina*, in botany, the name by which the great double-flowered pomegranate is commonly called. See the article PUNICA.

The fruit of this ſpecies is a powerful aſtringent, and conſequently recommended in fluxes of all kinds.

BALBASTRO, a city of Arragon, in Spain, ſituated upon the river Sinca, in 15′ weſt lon. and 42° north lat.

BALBEC, a town of aſiatic Turky, ſituated at the foot of mount Libanus, in 37° 30′ eaſt long. and 33° north lat.

BALCH, a city of Uſbec Tartary, ſituated on the frontiers of Perſia, in 65° 20′ eaſt long. and 37° north lat.

BALCONY, in architecture, a projecture in the front of a houſe, or other building, ſupported by pillars, or conſoles, and encompaſſed with a baluſtrade: or it is a kind of open gallery, for people to ſtand in, to behold any public ſhow, or for taking the air in. They are uſually level with the firſt floor, and are made of wood, or iron.

BALDACHIN, or BALDAQUIN, in architecture, a building in form of a canopy, ſupported by pillars, and frequently uſed as a covering to inſulated altars. Some alſo uſe the term baldachin for the ſhell over a door.

BALDIVIA, or VALDIVIA, a ſea-port town of Chili, in ſouth America, ſituated on the ſouth ſea, in 80° weſt longit. and 40° ſouth latitude.

BALDNESS, a defect of hair, owing to the want of a ſufficient ſupply of nutricious juice, or to ſome bad quality therein. See CALVITIES, ALOPECIA, &c.

BALDOC, a market-town in Hertfordſhire, about thirty-eight miles north of London, in 15′ weſt longit. and 51° 55′ north latitude.

BALE, in commerce, is ſaid of merchandizes packed up in cloth, and corded round

round very tight, in order to keep them from breaking, or preſerve them from the weather. Moſt of the merchandize capable of this kind of package, deſigned for fairs or exportation, ought to be in bales, and too much care cannot be taken in packing them, to prevent their being damaged. The bales are always to be marked and numbered, that the merchants to whom they belong, may eaſily know them.

A bale of cotton yarn is from three to four hundred weight; of raw ſilk, it is from one to four hundred; of lockram or dowlaſs either three, three and a half, or four pieces.

BALE-GOODS, among the engliſh merchants, are all ſuch as are imported or exported in bales; but the French give that name to certain hardwares, and other ſort of merchandize, which come to Paris, and are commonly made by bad workmen, of indifferent materials.

BALEARES, the antient name for the the iſlands of Majorca, Minorca, and Ivica. See the articles MAJORCA, &c.

BALI, an iſland of the Eaſt-Indies, ſituated in 114° eaſt lon. and 7° 30′ ſouth lat. This iſland, and the eaſt end of the iſland of Java, form a ſtreight about a mile over, of extremely difficult paſſage.

BALISORE, a ſmall ſea-port of the hither India, ſituated on the north-weſt part of the bay of Bengal, in 85° 15′ eaſt long. and 21° 30′ north latitude.

BALISTA, or BALLISTA. See the article BALLISTA.

BALISTES, a genus of the branchioſtegious order of fiſhes, having only one belly-fin, on the back there are ſome robuſt ſpines; the jaws are furniſhed with very large teeth, which are placed contiguous to each other, and are protended forwards, having much the appearance of thoſe in the human mouth; and in other ſpecies, of thoſe of the hog: the body and the head are compreſſed and broad.

BALIVO AMOVENDO, in law, was a writ for removing a bailiff from his office, for want of having ſufficient land in his bailiwick to anſwer the king and his people according to the ſtatute of Weſtminſter, 2 reg. Orig. 78.

BALK, among builders, is ſometimes uſed for the ſummer-beam of a houſe; ſometimes for the poles and rafters, which ſupport the roofs of barns, &c. and ſometimes for the beams uſed in making ſea-holds.

BALK, in agriculture, denotes a ridge, or bank between two furrows.

BALL, in a general ſenſe, a ſpherical and round body, whether it be ſo naturally, or turned into that figure by the hand of an artiſt: thus we ſay, a tennis-ball, foot-ball, cotton-ball, &c. The word is alſo uſed to ſignify ſome tools of ſeveral trades and arts, becauſe they bear ſome reſemblance to balls.

BALL, in the military art, comprehends all ſorts of bullets for fire arms, from the cannon to the piſtol.

Cannon-balls are made of iron, muſquet-balls, piſtol-balls, &c. are of lead. The experiment has been tried of iron balls for piſtols and fuſees, but they are juſtly rejected, not only on account of their lightneſs, which prevents them from flying ſtrait, but becauſe they are apt to furrow the barrel of the piſtol, &c. See SHOT.

BALL AND SOCKET is an inſtrument made of braſs, with a perpetual ſcrew, ſo as to move horizontally, vertically, and obliquely; and is generally uſed for the managing of ſurveying inſtruments, and aſtronomical inſtruments.

BALL *of a pendulum*, the ſame with bob. See the article BOB.

BALL, among printers. See the article PRINTING.

Puff-BALL, the engliſh name of the *lycoperdon*. See the article LYCOPERDON.

BALLAD, or BALLET, a kind of ſong, adapted to the capacity of the lower claſs of people; who being mightily taken with this ſpecies of poetry, are thereby not a little influenced in the conduct of their lives. Hence we find, that ſeditious and deſigning men never fail to ſpread ballads among the people, with a view to gain them over to their ſide.

BALLANCE, or BALANCE, in mechanics, one of the ſimple powers which ſerves to find out the equality or difference of weight in heavy bodies.

The ballance is of two kinds, antient and modern: the antient, or roman, called *ſtatera romana*, or ſteelyard, conſiſts of a lever A B (plate XXV. fig. 2. n° 1.) moveable on a center C, and ſuſpended near one of its extremities; the two arms C A, C B being kept in equilibrio by a ball A, fixed at the end of the ſhorteſt arm C A: on this the body to be weighed is ſuſpended, and its weight is meaſured by the diviſions marked on the beam, on the other ſide; where a moveable weight keeps the ballance in equilibrio. For example, if the body to be weighed, and put into the ſcale D, be in equilibrio with the weight, when this laſt is moved

to the ſixth diviſion on the longeſt arm, then will the ſaid body be juſt ſix times the weight, when the ſcale D is ſuſpended from the firſt diviſion; but if from the ſecond, as in the figure referred to, it will be only triple the weight.

The modern ballance conſiſts of a lever, ſuſpended exactly by the middle, and ſcales affixed to each extremity: the principle on which each is founded is the ſame, and may be conceived from what follows.

The modern or common ballance being a lever that has equal arms A G, and G B (*ibid.* n° 2.) with the center of motion C commonly placed directly over G; becauſe if the center of motion was in G, equal weights ſuſpended from A and B, would ſuſtain each other in any poſition of the lever A B; but when the center of motion is above G, they only ſuſtain each other when the lever A B is level; and when the weight at A is but a little greater than the weight at B, the ends A and B deſcend and aſcend by turns, till their common center of gravity *g* ſettles in the vertical line C *g*, where they ſuſtain each other, becauſe their center of gravity is ſuſtained by C. The ballance is falſe, when the arms A G and G B are unequal; and the exactneſs of this inſtrument, chiefly depends upon making the friction at the center of motion C as ſmall a poſſible.

The roman ballance or ſteelyard, is nothing but a lever of the firſt kind, but whoſe arms are unequal; ſo that its mechaniſm depends upon the ſame theorem with that of the lever. See the article LEVER.

The difference between the uſe of the ſcales and the ſteelyard, conſiſts in this, that as in the former, you make uſe of a larger power, or more weight, to eſtimate the weight of an heavier body; in the latter, you uſe the ſame power, but give it a greater velocity with reſpect to that of the weight, by applying it further from the fixed point, which will have the ſame effect.

Hydroſtatical BALLANCE. See the article HYDROSTATICAL-BALLANCE.

BALLANCE OF TRADE, in commerce, the equality between the value of the commodities bought of foreigners, and the value of the native productions tranſported into other nations.

It is reckoned that that nation has the advantage in the ballance of trade, which exports more of native commodities, and imports leſs of the foreign; ſo that the nation grows ſo much richer in bullion, as the ballance of that account amounts to, which muſt be made up in bullion or money.

Among various others, the moſt received methods of arriving at the knowledge whether a nation gains or loſes by foreign trade, or any branch thereof, are the following ones.

1°. A ſtrict ſurvey muſt be taken of what proportion the value of the commodities exported bears to thoſe imported. If the exports exceed the imports, it is concluded that that nation is ſo far in a gaining way, by the overplus imported in bullion. But this method is uncertain, by reaſon of the difficulty of obtaining a true account, either of the exports or imports; as cuſtom-houſe books are no rule in this caſe, by reaſon of the running of goods, eſpecially many fine commodities of ſmall bulk, but great value; beſides the various accidents which affect the value of the ſtock, either ſent out or brought in, as loſſes at ſea, *&c.*

2°. The ſecond method, no leſs defective than the other, is by obſerving the courſe of exchange, which if generally above the intrinſic value, or par of the coins of foreign countries, we not only loſe by ſuch exchange, but the ſame is a proof that we loſe by the general courſe of our trade.

3°. The third method is made from the increaſe or the diminution of our trade and ſhipping in general; for if theſe diminiſh, the nation loſes, and *vice verſa*: this ſeems equally imperfect with the following.

4°. A fourth way is, by obſerving the increaſe and diminution of our coin and bullion.

BALLANCE of a clock or watch. See the articles CLOCK and WATCH.

BALLANCE, LIBRA, in aſtronomy. See the article LIBRA.

BALLANCE-FISH, a name ſometimes uſed for the zygæna, or hammer-headed ſhark. See the article ZYGÆNA.

BALLANCER, in the hiſtory of inſects, a ſtyle, or oblong body, ending in a protuberance or head, found under each wing of the two-winged flies: theſe ſerve to poiſe the body of the fly.

BALLAST, a quantity of ſtones, gravel, or ſand, laid in a ſhip's hold, to make her ſink to a certain depth into the water, and ſail upright, rendering her

her of a prodigious weight. The ballaſt is ſometimes one quarter, one third, or one half, according to the difference of the bulk of the ſhip. Flat veſſels require the moſt ballaſt. Ships are ſaid to be in ballaſt, when they have no other loading. Maſters of veſſels are obliged to declare the quantity of ballaſt they bear, and to unload it at certain places. They are prohibited unloading their ballaſt in havens, roads, &c. the neglect of which prohibition has ruined many excellent ports.

BALLASTAGE, or LASTAGE. See the article LASTAGE.

BALLET. See BALLAD, and BALLS.

BALLIAGE, or BAILIAGE. See the article BAILIAGE.

BALLISHANNON, a large town of the county of Donnegal, and province of Ulſter, in Ireland, ſituated about ten miles ſouth of the town of Donnegal, in 8° 30′ weſt lon. and 54° 25′ north lat.

BALLISTA, in antiquity, a military machine uſed by the antients in beſieging cities, to throw large ſtones, darts, and javelins.

It reſembled our croſs-bows, though much larger, and ſuperior in force.

From this engine, ſtones of a ſize not leſs than mill-ſtones, were thrown with ſo great violence, as to daſh whole houſes in pieces at a blow. It is deſcribed thus, a round iron cylinder was faſtened between two planks, from which reached a hollow ſquare beam, placed croſſwiſe, and faſtened with cords, to which were added ſcrews; at one end of this ſtood the engineer, who put a wooden ſhaft with a big head into the cavity of the beam: this done, two men bent the engine by drawing ſome wheels: when the top of the head was drawn to the utmoſt end of the cords, the ſhaft was driven out of the balliſta, &c.

BALLOON, or BALLON, in a general ſenſe, ſignifies any ſpherical hollow body, of whatever matter it be compoſed, or for whatever purpoſes it be deſigned.

Thus, with chemiſts, balloon denotes a round ſhort-necked veſſel, uſed to receive what is diſtilled by means of fire; in architecture, a round globe on the top of a pillar; and among engineers, a kind of bomb made of paſte-board, and played off in fire-works, either in the air or in the water, in imitation of a real bomb.

Balloon, in the french paper trade, is a term for a quantity of paper, containing twenty-four reams. It is alſo the name of a ſort of brigantine uſed in the kingdom of Siam.

BALLOTA, or BALLOTE, in botany, a genus of the *didynamia gymnoſpermia* claſs of plants, the flower of which is monopetalous and cloven, the upper lip being erect and crenated, and the lower obtuſe and divided into three ſegments. There is no pericarpium; the cup incloſing four ovated ſeeds.

BALLOTADE, in the manege, the leap of a horſe between two pillars, or upon a ſtraight line, made with juſtneſs of time, with the aid of the hand, and the calves of the legs; and in ſuch a manner, that when his fore feet are in the air, he ſhews nothing but the ſhoes of his hinder feet, without yerking out. It differs from capriole and croupade, becauſe in the former of theſe, the horſe ſtrikes out his hinder legs with all his force, keeping them near and even; and in croupades, he draws his hinder feet under him.

BALLOTING, a method of voting at elections, &c. by means of little balls, uſually of different colours, and by the French called *ballotes*, which are put into a box privately.

BALLS, or BALLETS, in heraldry, a frequent bearing in coats of arms, uſually denominated according to their colours, bezants, plates, hurts, &c. See the article BEZANTS, &c.

BALLUSTER, a ſmall kind of pillar uſed for balluſtrades.

BALLUSTRADE, a ſeries or row of balluſters, joined by a rail; ſerving as well for a reſt to the elbows, as for a fence or incloſure to balconies, altars, ſtair-caſes, &c.

BALM, or BAUM, in botany, *meliſſa*. See the article MELISSA.

BALM, or BALSAM. See the article BALSAM.

BALNEUM, a term uſed by chemiſts to ſignify a veſſel filled with ſome matter, as ſand, water, or the like, in which another is placed that requires a more gentle heat than the naked fire. Thus *balneum arenoſum*, called alſo *balneum ſiccum*, and ſand heat, is when the cucurbit is placed in ſand, in aſhes, or filings of ſteel. *Balneum mariæ*, or *maris*, is when the veſſel containing the ingredients to be diſtilled, &c. is put into a veſſel of water, which is made to boil; ſo that no greater heat than that of boiling water can be communicated to the ſubſtance to be treated. And *balneum vaporis*, or *vapo-*

vaporarium, is when two veſſels are diſpoſed in ſuch a manner, that the vapour raiſed from the water contained in the lower, heats the matter contained in the upper. See the article BATH.

BALOTADE, or BALLOTADE. See the article BALLOTADE.

BALSAM, or NATIVE BALSAM, an oily, reſinous, liquid ſubſtance, flowing either ſpontaneouſly, or by means of inciſion, from certain plants of ſovereign virtue in the cure of ſeveral diſorders.

There are many kinds of balſams, but the moſt remarkable are theſe. 1. Balſam or balm of gilead, called alſo balſamum judaicum, ſyriacum, e meccha, and opobalſamum; being an exſudation from the true balſamum ſyriacum rutæ folio, ſo much eſteemed in the country where it is produced, that it is accounted a rich preſent from the chief prince of Arabia fælix to the grand ſignior. In order to have it genuine, it ſhould be choſen fluid as oil, of a very pale yellow colour, perfectly tranſparent, and of a fragrant ſmell, with ſomething of the lemon or citron flavour, but not too much of it. In medicine, it opens obſtructions of the lungs, and heals eroſions from acrimony and the worſt kind of ulcerations. It is preſcribed in aſthmas, pleuriſies, and whatſoever requires expectoration; in inward bruiſes and ſores, particularly thoſe of the reins and urinary paſſages; and externally it is uſed to diſcharge and incarnate. For internal uſe, it may either be given in boluſſes, or dropped on ſugar, or finally diſſolved into an emulſion by means of the yolk of an egg. The turkiſh women uſe it as a coſmetic. 2. Balſam of peru, which is diſtinguiſhed into two ſorts, the white and black. The former, by way of eminence called the balſam of inciſion, is a liquid of a white colour, reſembling in external appearance the balm of gilead, but eaſily diſtinguiſhed from it by its ſmell. It is excellent for green wounds. The black balſam is obtained by boiling the wood of the tree which produces it. The beſt is of a darkiſh red colour, and of an admirable fragrancy. It heals, dries, and diſcharges, and is much uſed externally, not only in wounds, but in palſies, iſchiadic and rheumatic pains, and likewiſe by perfumers, on account of its excellent ſmell. 3. Balſam of tolu, is produced from a tree, a ſpecies of the pine, which grows in new Spain. It is of a deep yellowiſh colour, approaching near to red, and of a moſt delicate ſcent, much beyond any other balſam. It firſt flows from the tree of the conſiſtence of ordinary turpentine; but by keeping, we meet with it frequently ſo hard as to be brittle. Its virtues are the ſame in general with thoſe of the peruvian and gilead kinds. It is given in conſumptions and diſorders of the breaſt, ſometimes in form of pills, ſometimes of electuary; but as it has not the pungency of the other kinds, the beſt form of giving it is in emulſion diſſolved in the yolk of an egg, and ſo mixed with water. 4. Balſam of capivi, or of copaiba, is the produce of one of the *arbores ſiliquoſæ flore uniformi* of Mr. Ray. It is of a thinner conſiſtence than the common turpentine, but much more fragrant and deterſive. It paſſes away quickly by urine, and mightily cleanſes thoſe paſſages; for which reaſon it hath obtained very much in gonorrhœas and all obſtructions and ulcerations of thoſe parts. The moſt agreeable way of taking it, is either in powdered ſugar, or dropped into water. 5. Balſam of liquid amber may be juſtly reckoned among the ſimples of the balſamic kind. It drops from a tree of Mexico, called arbor ſtyracifera, upon an inciſion being made into its bark. It is a reſinous and pingous liquor, of a reddiſh yellow colour, of an acrid aromatic taſte, and of the conſiſtence of venice turpentine. Its eſſence ſtrengthens the head and nervous ſyſtem, and its oil is of ſingular efficacy, both for external and internal uſes.

Factitious or artificial balſams, are certain compoſitions chiefly of balſamic and healing ingredients, made by apothecaries in imitation of the native balſams. It would be almoſt endleſs to ſpecify all the artificial balſams which have been contrived by diſpenſatory-writers. Lemery, in his *pharmacopée univerſelle*, has ſeventy-three different ſorts, beſides many others in foreign diſpenſatories. The moſt remarkable of the London and Edinburgh diſpenſatories, are balſam of amber, of guaiacum, of locatellus, of ſulphur ſimple, or with barbadoes tar, of turpentine, vulnerary, of many virtues, anodyne of bates and guido, apoplectic, magiſterial, martiale and paralyticum. For the uſes and method of preparing the balſam of Locatellus, ſee the article LOCATELLUS's *Balſam*.

Balſam, with chemiſts, is a name given to the ſolutions and preparations of ſome ſalts, as balſam of ſaturn, tartar, ſalgem, *&c.*

Balſam

Balſam of ſaturn is a ſolution of ſaccharum ſaturni, or ſugar of lead made with ſpirit of oil of turpentine, and digeſted till the matter hath gained a red tincture.

Balſam, among alchemiſts, ſometimes denotes the ſpirit of common ſalt, extracted by diſtillation, after placing a ſolution of the ſalt for a conſiderable time in horſe-dung, in order to putrefy. This is ſaid to preſerve bodies the moſt liable to corruption.

BALSAMICS, in pharmacy, ſoftening, reſtoring, healing and cleanſing medicines, of gentle attenuating principles, very friendly to nature.

Theſe medicines, on account of their fine, ſubtile, and volatile oil, are not only grateful and agreeable to the conſtitution, but act upon the fluids, as well as the ſolids, of human bodies; diffuſing their virtues through every part, and ſupplying the blood and humours with a ſeaſonable reinforcement of ſulphureous, warm and ethereal particles, increaſing their inteſtine motions, and conveying a general vigour to the vital juices.

Theſe medicines may be uſed with good ſucceſs, both internally and externally, in all diſeaſes of the head, nerves, ſpinal marrow, ſtomach and heart; ſuch as palſies, apoplexies, numbneſs and torpor of the ſenſes, weakneſs of the memory, difficulty of hearing, exceſſive weakneſs and faintings; they are alſo of ſingular ſervice in moſt diſorders of the ſtomach, and inteſtines, and are exquiſitely adapted to the old and infirm. See BALSAM.

BALSAMINA, in botany, a genus of the *ſyngeneſia polygamia* claſs of plants, the flower of which conſiſts of four, five, or ſix petals, and its fruit is an unilocular capſule, conſiſting of five valves, and containing a number of roundiſh ſeeds affixed to a placenta. See the article IMPATIENS.

BALTIC-SEA, that lying between Sweden on the north, and Germany and Livonia on the ſouth.

BALTIMORE, a town of the county of Cork, and province of Munſter, in Ireland, ſituated about five miles north of cape Clear, in 9° 15′ weſt longitude, and 51° 15′ north latitude.

BAMBERG, a city of Franconia, in Germany, eaſt longitude 10° 50′, and north latitude 50° 15′.

The biſhop of Bamberg is ſovereign of the city and diſtrict round it, for ſixty miles in length, and forty in breadth.

BAMBOE, or BAMBOU, a plant in the Indies, which multiplies very much by its root, from which ſprings a branchy tuft, after the manner of the european reeds. It is of the largeſt kind of cane, and decreaſes gradually to the top, where it bears a bloſſom, like our reeds. The bamboe is a ſpecies of arundo. See the article ARUNDO.

BAMFF, a town of Scotland, which gives name to a county, lying between Aberdeenſhire and Murray, along the ſouthern bank of the river Spey.

The town is ſituated at the mouth of the river Dovern, in 2° 5′ weſt longitude, and 57° 40′ north latitude.

BAMPTON, a market town of Oxfordſhire, ſituated on the river Iſis, about ten miles ſouth-weſt of Oxford: weſt longitude 1° 35′, and north latitude 51° 40′.

BAMPTON is alſo the name of a market-town of Devonſhire, twenty miles north of Exeter: weſt longitude 3° 40′, and north latitude 51° 5′.

BAN, or BANN. See the article BANN.

BAN, in commerce, a ſort of ſmooth, fine muſlin, which the Engliſh import from the Eaſt-Indies. The piece is almoſt a yard broad, and runs about twenty yards and an half.

BANBURY, a large borough-town in Oxfordſhire, twenty miles north of Oxford: weſt longitude 1° 20′, and north latitude 52° 5′.

BANC, or BENCH, in law, denotes a tribunal, or judgment-ſeat: hence, king's banc is the ſame with the court of king's bench, and common banc, with that of common pleas. See the articles KING'S BENCH and COMMON PLEAS.

BANCA, an iſland in the Eaſt-Indies, ſeparated from the ſouth-eaſt part of that of Sumatra by a very narrow channel: eaſt lon. 105°, and ſouth lat. 3°.

BANCALIS, a ſea-port town on the eaſt coaſt of Sumatra: eaſt longitude 99°, and north latitude 2°.

It is a Dutch ſettlement.

BANCOCK, a city of the kingdom of Siam: eaſt longitude 101°, north latitude 13° 30′.

BAND, in a general ſenſe, ſome ſmall, narrow ligament, wherewith any thing is bound, tied, or faſtened.

BAND, in architecture, a general name for any flat, low member, or moulding, that is broad, but not very deep.

BAND *of ſoldiers*, in military affairs, thoſe who fight under the ſame flag or enſign.

Trained BANDS. See TRAIN BANDS.

BAND *of penſioners*, are a company of forty

gentlemen, who receive a yearly allowance of 100 l. for attending on his majeſty on ſolemn occaſions. See the article PENSIONER.

BAND is alſo the denomination of a military order in Spain, inſtituted by Alphonſus XI. king of Caſtile, for the younger ſons of the nobility, who, before their admiſſion, muſt ſerve ten years, at leaſt, either in the army, or at court; and are bound to take up arms for the catholic faith againſt the infidels.

BAND, in ſurgery, a fillet, ſwathe, or piece of linen-cloth, wherewith either to cover, or ſurround certain parts that ſtand in need of aſſiſtance; and is, in this ſenſe, the ſame with what is otherwiſe called a bandage or roller.

BANDA, or LANTOR, the chief of the Banda-iſlands in the Eaſt Indies, where nutmegs grow; eaſt longitude 128°, and ſouth latitude 4° 30′.

BANDAGE, in ſurgery, a fillet, roller, or ſwathe, uſed in dreſſing and binding up wounds, reſtraining dangerous hæmorrhages, and in joining fractured or diſlocated bones.

Bandages ſhould be made of ſtrong linen cloth, that has been ſoftened by wearing. They are of different forms, according to the uſes they are deſigned for. Some are common, or applicable to any part; others are proper, or applicable only to particular parts. Some again are ſimple, or made up of one entire part; others compound, or compoſed of ſeveral pieces ſewed together in different manners. In plate XXV. fig. 3. N°. 3. repreſents a ſimple bandage not rolled up, and is that uſed in phlebotomy; N°. 2. is another ſimple bandage, rolled up at one end, and from thence called a ſingle-headed bandage; thoſe on the other hand are called double-headed, which are rolled up at both ends, as N°. 1.

Next to theſe come thoſe bandages, which, though conſiſting of one entire piece, are divided at both ends almoſt as far as the middle, and called by the ſurgeons four-headed bandages, as N°. 4. The bandage, N°. 5. is ſomewhat narrower and ſhorter; being divided only at one end, and perforated at the other: this is uſed in dreſſings applied to the penis, or a finger. N°. 6. repreſents a double headed bandage, divided about the middle, and called the uniting bandage, as ſerving to unite wounds made lengthwiſe. N°. 7. is the ſcapular bandage, the chief uſe of which conſiſts in this, that in dreſſing wounds of the thorax or abdomen, it is capable of ſupporting another wider bandage bound round the breaſt or belly. N°. 8. is a compound bandage, called the T bandage, from its reſemblance to that letter; its upper part is bound round the belly, and the lower part, paſſing under the body between the thighs, is tied to the upper one upon the back. This bandage is uſed for ſecuring ſuch dreſſings as ſhall be thought proper to be applied to the anus, or parts of generation.

BANDALEER, or BANDELEER, in military affairs, a large leathern belt, thrown over the right ſhoulder, and hanging under the left arm; worn by the antient muſqueteers, both for the ſuſtaining of their fire-arms, and for the carriage of their muſquet-charges, which being put up in little wooden caſes, coated with leather, were hung, to the number of twelve, to each bandeleer.

BANDELET, or BANDLET, in architecture, any little band, or flat moulding, as that which crowns the doric architrave.

BANDER-CONGO, a ſea-port town on the eaſtern ſide of the perſian gulph: eaſt longitude 54° 50′ and north lat. 27°.

BANDERET, a general, or one of the commanders in chief of the forces.

This appellation is given to the principal commanders of the troops of the canton of Bern in Switzerland, where there are four banderets, who command all the forces of that canton.

BANDEROLL, a little flag, in form of a guidon, extended more in length than breadth, uſed to be hung out on the maſts of veſſels, &c.

BANDITTI, a term peculiarly denoting companies of highwaymen, common in Italy and France; but ſometimes alſo uſed, in a more general ſenſe, for robbers, pirates, out-lawed perſons, ruffians, &c.

BANDLET, or BANDELET. See the article BANDELET.

BANDORA, the capital of the iſland of Salſet, or Canorin, on the weſt coaſt of the hither India: eaſt longitude 72° 30′ and north latitude 19°.

BANDORA is alſo the name of an antient muſical inſtrument, with ſtrings, reſembling a lute. See the article LUTE.

BANDY-LEGGED *perſons* are ſuch whoſe feet are diſtorted, turning either inward or outward, on either ſide; ariſing from ſome defect in the birth, or from the imprudence of the nurſe, endeavouring to make

make the child ſtand or walk before his legs were ſtrong enough to ſupport the reſt of his body.

Beſides the uſe of emollients, it is proper to apply a kind of ſtrong boots proportioned to the limb.

BANGLE EARS, an imperfection in a horſe, remedied in the following manner. Place his ears in ſuch a manner as you would have them ſtand; bind them with two little boards ſo faſt that they cannot ſtir, and then clip away all the empty wrinkled ſkin cloſe by the head.

BANGOR, a city of Carnarvonſhire, in north Wales: weſt longitude 4° 15′, and north latitude 53° 20′.

It is a biſhop's ſee, and ſituated on the ſea-ſide, about thirty miles weſt of St. Aſaph.

BANIANS, a religious ſect in the empire of the mogul, who believe a metempſychoſis, and will therefore eat no living creature, nor even kill noxious animals; but endeavour to releaſe them, when in the hands of others. See SHASTER.

The banians are ſaid to be ſo fearful of having communication with other nations, that they break their cups, if one of a different religion has drank out of them, or even touched them. 'Tis ſaid, that if they happen to touch one another, they purify and waſh themſelves before they eat, or enter their own houſes. They carry, hanging to their necks, a ſtone, called tamberane, as big as an egg, and perforated in the middle, through which run three ſtrings: this ſtone, they ſay, repreſents their great god, and upon that account, they have great reſpect ſhewn them by all the indians.

BANJAR, a river in the iſland of Borneo, in the mouth of which is a floating iſland, where the eaſt-india company have a factory.

BANISHMENT, a kind of puniſhment, whereby the guilty perſon is obliged to leave the realm.

There are two kinds of baniſhment; one voluntary and upon oath, the other upon compulſion for ſome crime or offence: the former, properly called abjuration, is now ceaſed; the latter is chiefly enjoined by judgment of parliament, or other courts of juſtice.

By *magna charta*, none ſhall be outlawed, or baniſhed his country, but by lawful judgment of his peers, according to the law of the land, 9 Hen. III. 29.

BANK, in commerce, a common repoſitory, where many perſons agree to keep their money, to be always ready at their call or direction: or certain ſocieties or communities, who take the charge of other people's money, either to improve it, or keep it ſecure.

There are banks of various kinds, and different in the nature of their conſtitutions and eſtabliſhments: ſome are inſtituted wholly on the public account, and put under the direction of the magiſtrates, as the famous bank of Amſterdam, where the money depoſited therein ſhall be always kept for the uſe of the proprietors, and ſhall never be let out for profit or advantage.

Payments made by aſſignments upon this bank, are valued from 3 to 6 *per cent.* above the payment of the money in ſpecie, ariſing from an opinion that the proprietors entertain of the equity of its adminiſtration; for judging themſelves ſecure, that their money lies always ready at hand, they ſeldom draw out large ſums, but make their mutual payments by transferring the ſums from one man's account to another.

A ſecond ſort of bank, is ſuch as conſiſts of a company of monied men, who being duly eſtabliſhed, and incorporated by the laws of their country, agree to depoſite a conſiderable fund, or joint ſtock, to be employed for the uſe of the ſociety; as lending money upon good ſecurity, buying and ſelling bullion, gold and ſilver, diſcounting bills of exchange, *&c.*

A third ſort, is the banks of private men, or partnerſhips, who deal in the ſame way as the former, upon their own ſingle ſtock or credit; and ſuch are the Lombard-ſtreet, or other bankers, as they are called.

There are public banks eſtabliſhed in moſt of the trading cities of Europe, as in Venice, London, Paris, Amſterdam, Hamburgh, *&c.* The bank of Venice is the moſt antient. It is eſtabliſhed by a ſolemn edict of the commonwealth, which enacts, that all payments of wholeſale merchandize, or letters of exchange, ſhall be in bank notes; that all debtors ſhall be obliged to carry their money to the bank, and all creditors receive their money from the bank; ſo that payments are performed by a ſimple tranſfer from the one perſon to the other. In matters of retail, effective payments are ſometimes made, which do not diminiſh, but rather augment the ſtock, by reaſon of the liberty of withdrawing their money at pleaſure, *&c.*

BANK, in natural hiſtory, denotes an elevation of the ground, or bottom of the ſea,

ſea, ſo as ſometimes to ſurmount the ſurface of the water, or, at leaſt, to leave the water ſo ſhallow, as uſually not to allow a veſſel to remain afloat over it.

In this ſenſe, bank amounts to much the ſame with flat, ſhoal, &c. There are banks of ſand, and others of ſtone, called alſo ſhelves, or rocks. In the north ſea, they alſo ſpeak of banks of ice, which are large pieces of that matter floating.

A long narrow bank is ſometimes called a *rib*.

The bank abſolutely ſo called, or the main bank, or great bank, denotes that of Newfoundland, the ſcene of the cod-fiſhery.

It is called the great bank, not only by reaſon of its vaſt extent, being, according to the Engliſh computation, two hundred miles long, and, according to the French, one hundred leagues, or three hundred miles; but alſo on account of ſeveral leſſer banks near it, where cod are alſo caught.

BANK, in veſſels which go with oars, is uſed for the bench where the rowers are ſeated; popularly called, by our ſeamen, the *thaught*.

In this ſenſe, we read of banks of gallies, of galeaſſes, of galliottes, of brigantines, and the like.

The Venetian gondolas have no banks; for the watermen row ſtanding.

The common gallies have twenty-five banks, that is, twenty-five on each ſide, in all fifty banks, with one oar to each bank, and four or five men to each oar.

The galeaſſes have thirty-two banks on a ſide, and ſix or ſeven rowers to a bank.

BANK alſo denotes an elevation of earth, ſtones, ſtakes, or other materials, in form of a wall, or cauſeway, to ſtop the waters, and prevent inundations.

BANK is alſo uſed, in ſeveral games, for the ſtock or fund of him who undertakes the game.

BANK *at Baſſet*, a ſum of money laid down by the tailleur, before the gameſters, to anſwer all the winning cards that ſhall turn up in his courſe of dealing.

BANKAFALET, a game at cards, which being cut into as many heaps as there are players, every man lays as much money on his own card as he pleaſes; and the dealer wins or loſes as many as his card is ſuperior or inferior to thoſe of the other gameſters.

The beſt card is the ace of diamonds; the next to it, the ace of hearts; then the ace of clubs; and, laſtly, the ace of ſpades; and ſo of the reſt of theſe ſuits in order, according to their degree.

The cheat lies, in ſecuring an ace, or any other ſure winning card; which are ſomehow marked, that the ſharper may know them.

BANKER, a perſon who traffics and negotiates in money; who receives and remits money from place to place, by commiſſion from correſpondents, or by means of bills or letters of exchange.

In France, it is not requiſite that a man be a merchant, in order to carry on banking; for that trade is permitted to all ſorts of perſons, even to foreigners, ſo far as relates to foreign banking, or dealing by exchange.

In Italy, the trade of a banker does not derogate from nobility, which is the reaſon why moſt of the younger ſons of the quality apply themſelves to that employment, in order to ſupport their families.

The monied goldſmiths, in the reign of king Charles the ſecond, firſt acquired this name. See the article BANK.

The Romans had two ſorts of bankers, whoſe office was much more extenſive than that of the bankers among us; theirs being that of public affairs, in whom were united the functions of a broker, agent, banker, and notary, managing the exchange, taking in money, aſſiſting in buying and ſelling, and drawing the writings neceſſary on all theſe occaſions.

BANKER, in bricklaying, a piece of timber whereon they cut the bricks.

The banker is ſix feet long, or more, according to the number of men to work at it, and nine or ten inches ſquare; it is to be laid on two piers of timber, three feet high from the floor they ſtand on.

BANKING, the making of banks to oppoſe the force of the ſea, rivers, or the like, and ſecuring the land from being overflowed thereby.

BANKING is more particularly applied to the keeping a bank, or the employment of a banker.

BANKISH, a province of the mogul's dominions, in the north part of the hither India, lying ſouth-weſt of the province of Caſſimere.

BANKRUPT, any perſon, either man or woman, that by trading hath gotten other perſons goods into his or her hands, and concealeth himſelf from his creditors.

It is not buying or ſelling of lands, but of perſonal things, that will make a perſon

ſon liable to be a bankrupt; nor is it buying only, nor ſelling only, but both. Every one that gets his livelihood by buying and ſelling in trade, may fall under a ſtate of bankruptcy upon his failing: but adventurers in the Eaſt-India company, members of the bank of England, or of the South-ſea company, ſhall not be adjudged bankrupts, in reſpect of their ſtock: alſo no perſon concerned as receiver-general of the taxes, *&c.* ſhall be a bankrupt. If a merchant gives over trade, and ſome years after becomes not ſolvent for money owed while a merchant, he is a bankrupt; but if for new debts, or old debts continued on new ſecurity, it is otherwiſe.

BANKRUPTCY, the failure, abſconding, and relinquiſhing of traffic in a merchant, a banker, or any other trader. See the article BANKRUPT.

The French make this difference between a bankruptcy and a failure, that the firſt is ſuppoſed voluntary and fraudulent, and the latter conſtrained and neceſſary, by means of accidents, *&c.* A failing, breaking, or ſtopping of payment, diminiſhes the merchant's credit, but does not note him with infamy, as bankruptcy does.

When a merchant fails to appear at the exchange, without apparent reaſon, it is called a failure of preſence; the bankruptcy becomes open from the day he abſconds, or the ſeal is affixed to his effects.

Commiſſion of BANKRUPTCY. See the article COMMISSION.

BANN, or BAN, *bannum*, or *bannus*, in the feudal law, a ſolemn proclamation, or publication of any thing. Hence the cuſtom of aſking, or bans, before marriage. See the article MARRIAGE.

BANN, in military affairs, a proclamation made in the army, by beat of drum, ſound of trumpet, *&c.* requiring the ſtrict obſervance of diſcipline, either for the declaring a new officer, or puniſhing an offender.

BANN *of the empire*, an imperial proſcription, being a judicial puniſhment, wherewith ſuch as are acceſſary to diſturbing the public peace, are judged unworthy of the immunities and protection of the empire, and are out-lawed or baniſhed, *&c.*

BANNER denotes either a ſquare flag, or the principal ſtandard belonging to a prince.

We find a multiplicity of opinions concerning the etymology of the word banner; ſome deriving it from the latin *bandum*, a band or flag; others, from the word bann, to ſummons the vaſſals to appear in arms; others, again, from the german *ban*, a field or tenement, becauſe landed men alone were allowed a banner; and, finally, there are ſome who think it is a corruption of *panniere*, from *pannus*, cloth, becauſe banners were originally made of cloth.

BANNERET, an antient order of knights, or feudal lords, who poſſeſſing ſeveral large fees, led their vaſſals to battle under their own flag, when ſummoned thereto by the king.

This order is certainly moſt honourable, as it never was conferred but upon ſome heroic action performed in the field. Antiently there being but two kinds of knights, great and little, the firſt were called bannerets, the ſecond bachelors; the firſt compoſed the upper, the ſecond the middle nobility.

In France, they are ſaid to tranſmit their degree to their poſterity; but in England, it dies with them. We have had none of this order created in England, ſince the time of king Charles the firſt; ſo that this order is now become extinct among us.

The form of the banneret's creation was this; on a day of battle, the candidate preſented his flag to the king, or general, who cutting off the train, or ſkirt thereof, and making it a ſquare, returned it again; the proper banner of bannerets, who, from hence, are ſometimes called knights of the ſquare flag.

BANNISTERIA, in botany, a diſtinct genus of plants, according to Linnæus; but accounted only a ſpecies of clematis by other botaniſts.

It belongs to the *decandria-trigynia* claſs; its flower conſiſts of five very large, orbicular petals; and its fruit is compoſed of three unilocular capſules, running into long alæ.

BANNIMUS, the form of expulſion of any member from the univerſity of Oxford, by affixing the ſentence up in ſome public place, as a denunciation of it.

BANNOCK, a kind of oat-cake, baked in the embers, or on a ſtone placed before the fire; it is common in the northern parts of the kingdom.

BANQUET, a feaſt or entertainment, where people regale themſelves with pleaſant foods, or fruits. It ſignifies alſo a little bank, a raiſed way.

BANQUET, in the manege, that ſmall part of the branch of a bridle that is under the

the eye, which being rounded like a ſmall rod, gathers and joins the extremities of the bitt to the branch, and that in ſuch a manner, that the banquet is not ſeen, but covered by the cope, or that part of the bitt that is next the branch.

BANQUET-LINE, an imaginary line drawn, in making a bitt, along the banquet, and prolonged up or down, to adjuſt the deſigned force or weakneſs of the branch, in order to make it ſtiff or eaſy.

BANQUET, or BANQUETTE, in fortification, a little foot bank, or elevation of earth, forming a path, which runs along the inſide of a parapet, upon which the muſqueteers get up, in order to diſcover the counterſcarp, or to fire on the enemy in the moat, or in the covered-way.

BANQUETTING-ROOM, or HOUSE. The antient Romans ſupped in the atrium, or veſtibule, of their houſes; but, in after-times, magnificent ſaloons, or banquetting houſes, were built, for the more commodious and ſplendid entertainment of their gueſts. Lucullus had ſeveral of theſe, each diſtinguiſhed by the name of ſome god; and there was a particular rate of expence appropriated to each. Plutarch relates with what magnificence he entertained Cicero and Pompey, who went with deſign to ſurprize him, by telling only a ſlave who waited, that the cloth ſhould be laid in the Apollo. The emperor Claudius, among others, had a ſplendid banquetting-room, named Mercury. But every thing of this kind was outdone by the luſtre of that celebrated banquetting-houſe of Nero, called *domus aured*; which, by the circular motion of its partitions, and ceilings, imitated the revolution of the heavens, and repreſented the different ſeaſons of the year, which changed at every ſervice, and ſhowered down flowers, eſſences, and perfumes, on the gueſts. Heliogabulus, nevertheleſs, is ſaid to have improved as much upon Nero, as the latter had done on Lucullus.

BANSTICKLE, in ichthyology, the ſame with the gaſterofteous, or prickle back. See the article GASTEROSTEOUS.

BANTAM, the capital of a large kingdom, and a port town of great trade, ſituated on the north-weſt coaſt of the iſland of Java, in 105° eaſt longitude, and 6° 30′ ſouth latitude.

BANTAM-WORK, a kind of painted or carved work, reſembling that of japan, only more gaudy.

Bantam-work is of leſs value among connoiſſeurs, though ſometimes preferred, by the unſkilful, to the true japan-work. Formerly it was in more uſe, and eſteem, than at preſent, and the imitation of it much practiſed by our japanners.

There are two ſorts of Bantam, as well as of japan-work; as, in the latter, ſome are flat, lying even with the black, and others high or emboſſed, ſo, in bantam-work, ſome is flat, and others in-cut, or carved into the wood, as we find in many large ſcreens; with this difference, that the japan artiſts work chiefly in gold and other metals, and the bantam generally in colours, with a ſmall ſprinkling of gold here and there.

For the flat bantam-work, it is done in colours, mixed with gum-water, proper for the thing deſigned to be imitated. For the carved, or in-cut kind, the method of performing it is thus deſcribed by an ingenious artiſt. 1. The wood is to be primed with whiting and ſize, ſo often till the primer lie near a quarter of an inch thick; then it is to be water-plained, *i. e.* rubbed with a fine wet cloth, and, ſome time after, bruſhed very ſmooth, the blacks laid on, varniſhed up with a good body, and poliſhed well, though with a gentle hand. This done, the deſign is to be traced out with vermillion, and gum-water, exactly in the manner wherein it is intended to be cut; the figures, trees, buildings, *&c.* in their due proportions. Then the graver is applied, with other tools of proper ſhapes, differing according to the workman's fancy. With theſe he cuts deep or ſhallow, as is found convenient, but never deeper than the whiting lies; the wood being never to feel the edge of the inſtrument. Lines, or parts of the black, are ſtill to be left, for the draperies and other out-lines, and for the diſtinction of one thing from another; the rule being to cut where the white is, and leave the black untouched. The carving being finiſhed, they take to the pencil, with which the colours are laid into the cut-work. After this, the gold is to be laid in theſe places which the deſign requires; for which purpoſe, a ſtrong, thick gum-arabic water is taken, and laid with a pencil on the work; and, while this remains wet, leaf-gold is cut with a ſharp ſmooth-edged knife, in little pieces, ſhaped to the bigneſs and figure of the places where they are to be laid. Theſe being taken up with a little cotton, they dab them with the ſame cloſe to the gum-water, which affords a rich

luſtre. The work thus finiſhed, they clear up the black with oil, taking care not to touch the colours. The European workmen, in lieu of leaf-gold, ordinarily uſe braſs-duſt, which is leſs bright and beautiful.

BANTRY, a town of Ireland, ſituated on a bay of the ſame name, in the county of Cork, and province of Munſter: weſt longitude 9° 20′, north latitude 51° 30′.

BAPAUME, a fortified town of the french Netherlands, about twelve miles ſouth-eaſt of Arras: eaſt longitude 3°, north latitude 50° 10′.

BAPTISM, in matters of religion, the ceremony of waſhing; or a ſacrament, by which a perſon is initiated into the chriſtian church.

Grotius is of opinion, that baptiſm had its original from the time of the deluge, after which he thinks it was inſtituted in memory of the world's having been purged by water: and ſome think, that it was added to circumciſion, ſoon after the ſamaritan ſchiſm, as a mark of diſtinction to the orthodox Jews. However this may be, it is generally agreed on, that the Jews practiſed this ceremony on their proſelytes after circumciſion, long before the coming of Jeſus Chriſt. For the matter of baptiſm, any natural water is held ſufficient, but nothing elſe is allowed. In the primitive times, the ceremony was performed by immerſion, as it is to this day in the oriental churches, agreeably to the original ſignification of the word, which means dipping, or plunging. The practice of the weſtern churches is to ſprinkle the water upon the head or the face of the perſon to be baptized, except the church of Milan, in whoſe ritual it is ordered that the head of the infant be plunged three times into the water. A trine immerſion was uſed firſt, and continued for a long time: this was either to ſignify the three days our Saviour lay in the grave, or the three perſons in the trinity; but it was afterwards laid aſide, becauſe the arians uſed it. There are abundance of ceremonies delivered by eccleſiaſtical writers, as uſed in baptiſm, which are now laid aſide, tho' there are not wanting thoſe who contend for their re-admiſſion. It appears that in the primitive times, none were baptized but adults, though ſeveral learned men contend, that infants were admitted to this ſacrament. Formerly there were great diſputes whether the baptiſm of heretics was valid; the general opinion ran for the affirmative, provided it was conferred in the name of the trinity; and therefore they allowed that given by laymen, or even by women, in caſe of neceſſity.

Divines diſtinguiſh three ſorts of baptiſm, 1. Water-baptiſm, or that already mentioned. 2. Baptiſm of fire, which is the perfect love of God, joined to an earneſt deſire to be baptized, called alſo the baptiſm of the Holy Ghoſt. 3. Baptiſm of blood, which is the martyrdom of a catechumen.

BAPTISM, in the ſea-language, a ceremony in long voyages on board merchant ſhips, practiſed both on perſons and veſſels, who paſs the tropic, or line, for the firſt time. The baptizing the veſſels is ſimple, and conſiſts only in waſhing them throughout with ſea-water; that of the paſſengers is more myſterious. The oldeſt of the crew, that has paſt the tropic or line, comes with his face blacked, a groteſque cap on his head, and ſome ſea-book in his hand, followed by the reſt of the ſeamen dreſſed like himſelf, each having ſome kitchen-utenſil in his hand, with drums beating. He places himſelf on a ſeat on the deck, at the foot of the main-maſt. At the tribunal of this mock magiſtrate, each paſſenger not yet initiated, ſwears he will take care the ſame ceremony be obſerved, whenever he is in the like circumſtances: then by giving a little money by way of gratification, he is diſcharged with a little ſprinkling of water, otherwiſe he is heartily drenched with ſtreams of water, poured upon him; and the ſhip-boys are incloſed in a cage, and ducked at diſcretion.

The ſea-men, on the baptizing a ſhip, pretend to a right of cutting off the beak-head, unleſs redeemed by the captain.

BAPTISMAL, ſomething belonging to baptiſm; thus, we ſay, baptiſmal vow, fonts, preſents, *&c.*

BAPTISTS, in church-hiſtory, the name by which the anabaptiſts love to diſtinguiſh themſelves. See ANABAPTISTS.

BAPTISTERY, in eccleſiaſtical writers, a place in which the ceremony of baptiſm is performed. In the antient church, it was one of the *exedræ* or buildings, diſtinct from the church itſelf, and conſiſted of a porch or anti-room, where the perſons to be baptized made their confeſſion of faith; and an inner room where the ceremony of baptiſm was performed. Thus it continued till the ſixth century, when the baptiſteries began to be taken

into the church-porch; and afterwards into the church itſelf. It is an obſervation of ſome learned men, that antiently there was but one baptiſtery in a city, and that at the biſhop's church; and that afterwards they were ſet up in pariſh-churches, with the ſpecial allowance however of the biſhop.

BAR, in a general ſenſe, denotes a ſlender piece of wood, or iron, for keeping things cloſe together.

BAR, in courts of juſtice, an incloſure made with a ſtrong partition of timber, where the council are placed to plead cauſes. It is alſo applied to the benches, where the lawyers or advocates are ſeated, becauſe antiently there was a bar to ſeparate the pleaders from the attornies and others. Hence our lawyers, who are called to the bar, or licenced to plead, are termed barriſters, an appellation equivalent to licentiate in other countries.

BAR, in law, a plea of a defendant, which is ſaid to be ſufficient to deſtroy the plaintiff's action. It is divided into bar ſpecial, bar to common intendment, bar temporal, and bar perpetual. Bar ſpecial, falls out upon ſome ſpecial circumſtances of the caſe in queſtion, as where an executor being ſued for his teſtator's debt, pleads that he had no goods in his hands at the day on which the writ was ſued out. Bar to common intendment, is a general bar, which commonly diſables the plaintiff's declaration. Bar temporary is ſuch as is good for the preſent, but may afterwards fail; and bar perpetual is that which overthrows the plaintiff's action for ever. In perſonal actions, once barred, and ever ſo, is the general rule, but it is intended, where a bar is to the right of the cauſe, not where a wrong action is brought.

BAR, in heraldry, an ordinary in form of the feſſe, but much leſs.

It differs from the feſſe only in its narrowneſs, and in this, that the bar may be placed in any part of the field, whereas the feſſe is confined to a ſingle place. See plate XXVI. fig. 3.

Bar-gemel, that is a double bar, called by the French *jumelles*, and by the latin writers *jugariæ faſciolæ* and *juſtitiæ bijuges*, is a diminutive of the feſſe. See plate XXVI. fig. 4. and the article FESSE.

BAR, in the manege, the higheſt part of that place of a horſe's mouth, ſituated between the grinders and tuſhes; ſo that the part of the mouth, which lies under, and at the ſide of the bars, retains the name of the gum. A horſe with ſenſible bars has a fine light mouth, with an even and firm appui. See the article APPUI.

A horſe with round hard bars muſt have a bitt that will rouze him, that is, one that does not bend, to give room to the tongue in the middle.

Theſe are very deſperate bars, which have been broke and cicatrized, and by that means become inſenſible. A horſe with a fine mouth has his bars ſharp, and edged like thoſe of a barbary horſe.

BAR, in muſic, a ſtroke drawn perpendicularly acroſs the lines of a piece of muſic, including between each two, a certain quantity or meaſure of time, which is various as the time of the muſic is either triple or common. In common time, between each two bars is included the meaſure of four crotchets; in triple, three. The principal uſe of bars is to regulate the beating of time, in a concert. See the articles TIME and MEASURE.

BAR, in hydrography, denotes a bank of ſand, or other matter, whereby the mouth of a river is in a manner choaked up.

The term bar is alſo uſed for the ſtrong beam, wherewith the entrance of an harbour is ſecured: this is more commonly called boom.

BAR, BARRA, in commerce. See BARRA.

BAR, or BAR-LE-DUC, in geography, a dutchy belonging to France, lying north-weſt of Lorrain, on both ſides the river Maeſe, whereof Bar-le-duc is the principal town: eaſt longitude 5° 15′, and north latitude 48° 40′.

BAR is alſo a town of Podolia, in Poland, ſituated in 28° eaſt longitude, and 48° 20′ north latitude.

BAR-MASTER, among miners, the perſon who keeps the gage, or diſh for meaſuring the ore.

BAR-SHOT. See the article SHOT.

BARACKS, or BARRACKS. See the article BARRACKS.

BARACOA, a town on the north-eaſt part of the iſland of Cuba in north America, in 76° weſt long. and 21° north lat.

BARALIPTON, among logicians, a term denoting the firſt indirect mode of the firſt figure of ſyllogiſm. A ſyllogiſm in baralipton, is when the two firſt propoſitions are general, and the third particular, the middle term being the ſubject in the firſt propoſition, and the predicate in the ſecond. Thus,

BA Every evil ought to be feared:
RA Every violent paſſion is an evil;
LIP Therefore ſomething that ought to be feared is a violent paſſion.

BARALLOTS, *baralotti*, in church-hiſtory,

ry, a ſect of heretics at Bologna in Italy, who had all things in common, even their wives and children.

Their facility in complying with all manner of debauchery, made them get the name *obedientes*, compliers.

BARANCA, a port-town of Terra Firma, in ſouth America; ſituated about thirty miles up the river Grande, in 75° 30′ weſt longit. and 11° north latit.

BARANGI, officers among the Greeks of the lower Empire. Cujas calls them in latin *protectores*, and others give them the name of *ſecurigeri*. It was their buſineſs to keep the keys of the city gates, where the emperor reſided.

Codinus, and others believe they were engliſhmen, and that they came from an iſland called Thule.

BARANWAHR, a town of lower Hungary, not far from the Danube, in 20° eaſt longitude, and 46° 20′ north latitude.

BARAPICKLET, bread made of fine flour, and kneaded up with barm, which makes it very light and ſpungy. Its form is round, about a hand breadth.

BARATHRUM, in antiquity, a deep dark pit at Athens, into which condemned perſons were caſt headlong. It had ſharp ſpikes at the top, that no man might eſcape out, and others at the bottom to pierce and torment ſuch as were caſt in.

BARB, or BARBE, in commerce. See the article BARBE.

BARBA, BEARD, in botany, a word uſed in compoſition with others for ſeveral plants: thus, *barba aron* denotes the ſedum, or common houſe-leek; *barba capræ*, the aruncus of Linnæus. See the articles SEDUM and ARUNCUS.

BARBACAN, or BARBICAN, an outer defence, or fortification to a city or caſtle, uſed eſpecially as a fence to the city, or walls; alſo, an aperture made in the walls of a fortreſs, to fire through upon the enemy.

BARBACAN is alſo uſed to denote a fort at the entrance of a bridge, or the outlet of a city, having a double wall with towers.

BARBACAN, in architecture, a canal, or opening left in the wall, for water to come in and go out, when buildings are erected in places liable to be overflowed, or to drain off the water from a terras, or the like.

BARBADOES, one of the britiſh caribbee iſlands, lying eaſtward of all the reſt, in 59° 30′ weſt longit. and 13° north lat. being only twenty-five miles in length, and about fifteen in breadth.

BARBADOES-TAR, a mineral fluid of the nature of the thicker fluid bitumens, of a nauſeous, bitteriſh taſte, very ſtrong and diſagreeable ſmell, found in many parts of America trickling down the ſides of the mountains, and ſometimes floating on the ſurface of the waters. It has been greatly recommended in coughs, and other diſorders of the breaſt and lungs.

BARBARA, among logicians, the firſt mode of the firſt figure of ſyllogiſms.

A ſyllogiſm in barbara, is one whereof all the propoſitions are univerſal, and affirmative; the middle term being the ſubject of the firſt propoſition, and attribute in the ſecond. For example,

BAR Every wicked man is miſerable;
BA All tyrants are wicked men;
RA Therefore all tyrants are miſerable.

BARBARIAN, a name given by the antient Greeks and Romans, to all who were not of their own country, or were not inſtituted in their language, manners and cuſtoms.

In this ſenſe the word ſignified with them no more than foreigner, not ſignifying, as among us, a wild, rude, or uncivilized perſon.

BARBARISM, in a general ſenſe, a rudeneſs of language or behaviour.

BARBARISM, in grammar, an offence againſt the purity of ſtile or language; or an ungrammatical way of ſpeaking or writing, or contrary to the true idiom of any particular language.

BARBARY, a large tract of Africa, extending along the Mediterranean ſea, from 2° weſt longitude to 30° eaſt longitude, that is, from the river Mulvia, which ſeparates it from Morocco to Egypt.

It comprehends the countries of Algiers Tunis, Tripoli, and Barca.

BARBE, in commerce, a barbary horſe, greatly eſteemed for its beauty, ſtrength, and ſwiftneſs. Barbes are commonly of a ſlim ſhape, and have very thin legs; they retain their vigour to the laſt, and are therefore much prized for ſtallions. They are uſed both for the ſaddle and the coach. It is reported that they will outrun an oſtrich, and that ſome of them are ſold for a thouſand ducats, or one hundred camels; they are fed with camel's milk ſparingly, and their genealogy is carefully preſerved.

BARBE, in the military art: to fire in barbe, means to fire the cannon over the parapet, inſtead of firing through the embraſſures; in which caſe the parapet muſt not be above three feet and a half high.

BARBE, or BARDE, is an old word, de-

noting the armour of the horſes of the antient knights and ſoldiers, who were accoutered at all points. It is ſaid to be an armour of iron and leather, wherewith the neck, breaſt and ſhoulders of the horſe were covered.

BARBE, in geography, a town of new Biſcay in Mexico; ſituated in 110° weſt longitude, and 26° north latitude.

BARBED, in a general ſenſe, bearded like a fiſh-hook, ſet with barbes, alſo ſhaved or trimmed.

BARBED, and CRESTED, in heraldry, an appellation given to the combs and gills of a cock, when particularized for being of a different tincture from the body.

A barbed croſs, is a croſs the extremities whereof are like the barbed irons uſed for ſtriking of fiſh. See plate XXVI. fig. 1.

BARBEL, *barbus*, in ichthyology, a ſpecies of cyprinus, with the upper jaw longeſt, four cirri or beards, and ſeven bones in the pinna ani.

BARBELICOTÆ, in church-hiſtory, a ſect of gnoſtics, who affirmed that an immortal Eon had commerce with a virgin called Barbeloth, to whom he granted ſucceſſively the gift of prophecy, incorruptibility, and eternal life.

Their ceremonies were not leſs abominable than their doctrine abſurd.

BARBER, one who makes a trade of ſhaving, or trimming, the beards of other men, for money.

BARBERINO, a town of Tuſcany in Italy, ſituated upon the river Siera, in 11° eaſt longitude, and 44° 5′ north latitude.

BARBERRY-BUSH, BERBERIS, in botany. See the article BERBERIS.

BARBICAN, or BARBACAN. See the article BARBACAN.

BARBLES, or BARBS, in farriery, the knots or ſuperfluous fleſh, that grow up in the channels of a horſe's mouth, that is, in the intervals that ſeparate the bars, and lie under the tongue.

BARBUDA, one of the britiſh caribbee iſlands, about twenty miles long, and twelve broad, in 61° weſt longitude, and 18° north latitude.

BARBUS, the BARBEL. See BARBEL.

BARCA, a country lying on the Mediterranean, between Tripoli and Egypt; a barren deſart for the moſt part.

BARCALON, an appellation given to the prime miniſter of the king of Siam. The barcalon has in his department every thing relating to commerce, both at home and abroad. He is likewiſe ſuper-intendant of the king's magazines.

BARCELONA, the chief city of Catalonia, in Spain. It is ſituated in a large plain along the ſhore of the Mediterranean; being divided into the new and old town, ſeparated from each other by a wall and ditch: eaſt longitude 2°, and north latitude 41° 20′.

BARCELONETTA, a town of Piedmont, now ſubject to France: eaſt longitude 6° 40′, and north latitude 44° 35′.

BARCELOR, or BASSELOR, a port-town on the coaſt of Malabar, in 74° 15′ eaſt longitude, and north latitude 13° 30′.

BARCELOS, a town of the province of Entre-Minho-Duero, in Portugal, about thirty miles north of Porto, in 9° 15′ weſt longitude, and 41° 20′ north latitude.

BARD, a poet among the antient Gauls and Britons, who celebrated the praiſes of heroes, with a view to inculcate virtue, and ſometimes to terminate a difference between two armies at the point of engagement. It is diſputed wherein the bards differed from the druids; ſome pretend that theſe were the prieſts and philoſophers of the nation, and that thoſe were only the poets and hiſtorians; but it is more probable that druid was a general word, comprehending the prieſts, the judges, the inſtructors of youth, and the bards or poets. See the article DRUID.

The bards were not only the poets but the genealogiſts, biographers, and hiſtorians of thoſe countries and ages. The genealogical ſonnets of the iriſh bards are ſtill the chief foundations of the antient hiſtory of Ireland. It was cuſtomary for the bards to ſing theſe compoſitions in the preſence of their nobles, and at their chief feſtivals and ſolemnities. In the Highlands of Scotland there are bards ſtill in being, and conſiderable remains of many of the compoſitions of the old britiſh bards ſtill preſerved; but the moſt genuine, intire, and valuable remains of the works of the antient bards, and perhaps the nobleſt ſpecimen of uncultivated genius, if not the moſt ſublime fragments of antient poetry now extant, are the poems of Oſſian the ſon of Fingal, a king of the Highlands, who flouriſhed in the ſecond or third century, lately collected by Mr. Mac-Pherſon, and by him tranſlated from the Erſe or Gallic language into Engliſh.

BARDELLE, in the manege, a ſaddle made in the form of a great ſaddle, but only of cloth ſtuffed with ſtraw, and tied tight down with packthread, without either leather, wood, or iron. In Italy they trot their colts with ſuch ſaddles.

BAR-

BARDESANISTS, in church-hiſtory, chriſtian hereties of the ſecond century, who maintained that the devil was a ſelf-exiſtent independent being; that Jeſus Chriſt was not born of a woman, but brought his body with him from heaven; and denied the reſurrection of the body.

BARDEWICK, a town of lower Saxony in Germany, about ſeven miles north of Lunenburg.

It is ſubject to the elector of Hanover, and ſituated in 10° 6′ eaſt longitude, and 53° 40′ north latitude.

BARDS, BARDI. See the article BARD.

BARDS, in the art of cookery, broad ſlices of bacon, with which pullets, capons, pigeons, &c. are ſometimes covered, before they are roaſted, baked, or otherwiſe dreſſed.

BARDT, a port-town of Pomerania, in Germany: it is ſubject to Sweden, and ſituated in 13° 20′ eaſt longitude, and 54° 20′ north latitude.

BARE, in a general ſenſe, denotes ſomething not cloathed or covered: thus, we ſay, the bare-footed carmelites, trinitarians, &c. See CARMELITES.

BAR-FEE, a fee of twenty-pence which every priſoner acquitted of felony, pays to the gaoler.

BARFLEUR, a town and cape of Normandy, in France, about twelve miles eaſt of Cherburg: weſt longitude 1° 15′ and north latitude 49° 47′.

BARGAIN, in commerce, a contract or agreement in buying and ſelling. Hence, to buy a good bargain is to buy cheap.

Bargain is alſo an agreement to give a certain price, and there are three things requiſite to make it complete and perfect. 1. The merchandize ſold. 2. The price. 3. The mutual agreement or conſent.

The merchandize ſold ought to be certain, the price of the thing ſold ſhould be paid in current money, otherwiſe it would be an exchange; and the conſent ought to be equally free, on both ſides, from error and violence. If then there happens to be an error in the ſubſtance of the thing bought, it makes the bargain void; but if it lies only in the quality of the thing ſold, it does not diſſolve the bargain, provided there be no voluntary fraud on the ſide of the ſeller. Thus, if I deſign to buy pewter, and inſtead of that, the perſon ſells me lead, the ſale cannot ſtand good, becauſe I was impoſed upon in the very ſubſtance of the thing I wanted to buy. But if I deſigned to buy a clock that went true, and it does not prove ſo, the bargain ought to ſtand, becauſe I was deceived in the qualities only of the thing ſold to me.

A bargain and ſale of lands, &c. in fee, muſt, according to our law, be in writing indented and inrolled, either in one of the courts at Weſtminſter, or in the county where the lands lie, before the cuſtos rotulorum, and juſtices of peace. A warrant and covenant may be inſerted in a bargain and ſale, but the deed is good without any ſuch addition; and if it be made for money and natural affection, the eſtate will paſs, though you do not inrol it.

BARGE, in naval affairs, a boat of ſtate and pleaſure, adorned with various ornaments, having bales and tilts, and ſeats covered with cuſhions and carpets, and benches for many oars; as a company's barge, an admiral's barge, &c. It is alſo the name of a flat-bottomed veſſel employed for carrying goods in a navigable river, as thoſe upon the river Thames, called weſt country barges.

BARGE-COUPLES, in architecture, a beam morticed into another, to ſtrengthen the building.

BARGE-COURSE, with bricklayers, a term uſed for that part of the tiling which projects over without the principal rafters, in all ſorts of buildings, where there is either a gable or a kirken-head.

BARILLIA, a kind of ſpaniſh potaſh, uſed in the glaſs trade.

BARING *of trees*, in agriculture, the taking away ſome of the earth about the roots, that the winter-rain and ſnow-water may penetrate further into the roots. This is frequently practiſed in autumn.

BARK, *cortex*, in the anatomy of plants, the exterior part of trees, correſponding to the ſkin of an animal.

The bark may be divided into the outward ſkin, or cuticle; and the inner or cortical ſubſtance. The outward ſkin, or cuticle, ſeems to derive its origin from the inner or cortical ſubſtance, and to be nothing more than the old bark dried and ſhrivelled up, being ſupplanted yearly by a new one, after the ſame manner as a ſnake caſts her ſkin. It is compoſed of little bladders, or veſicles horizontally placed, ſo as to form a ring; among which are alſo intermixed, more or leſs, ſeveral parallel woody fibres, or ſap veſſels. The inner ſubſtance conſiſts, 1. Of ſeveral enfoldments of woody fibres, interwoven in the manner of a net, and wrapping over each other like the coats

of

of an onion. 2. Of a great many little bladders, or veſicles, ſometimes of an oval, and ſometimes an angular figure, which fill up the ſpaces between the ſaid fibres; and are placed, as it were, in lines horizontally towards the wood. And, 3. Of its own peculiar veſſels, which contain the proper and ſpecific juice of the plant. The woody fibres are certain tubular bodies, hollow for the reception of their proper fluids; and are compoſed of a great many ſmaller concave fibres, diſpoſed in a quadrangular figure, and communicating one with another. Theſe veſſels do not run in right-lines or parallels; but, for the moſt part, are gathered together, as it were, in little bundles; which, when extended, or ſeparated from each other, form a kind of net, or reticular coat, with which they embrace the wood. Dr. Grew calls them the lymphatic ducts, from their containing an aqueous, limpid, and almoſt inſipid fluid. The bladders, or veſicles, which are full of liquor they receive from the woody fibres, are, for the moſt part, placed horizontally in right-lines, which run from the cuticle towards the wood, and are called, by Dr. Grew, the parenchyma of the bark, as being analogous to the parenchyma in the bowels of animals. Into theſe tranſverſe veſicles, the aſcending fluid, which may be called the chyle of the tree, is depoſited; where having remained for ſome time, and being intimately mixed with the former juice, it is at length exalted into the nature of an aliment, and from thence diſtributed to the other parts of the plant. And as there is great plenty of this kind of fluid in theſe little bladders, or veſicles, it is no wonder, that the bark of a tree ſhould ſupply the fire with a ſtronger and more abundant pabulum, than any other part.

The antients wrote their books on bark, eſpecially of the aſh and lime-tree, not on the exterior, but on the inner and finer bark, called philyra.

There are a great many kinds of barks, in uſe in the ſeveral arts: ſome in agriculture, and in tanning leather, as the oak-bark; ſome in phyſic, as the *quinquina*, or jeſuits bark, mace, *&c.* others in dying, as the bark of alder and walnut-trees; others in ſpicery, as cinnamon, caſſia lignea, *&c.* and others for divers uſes, as the bark of the cork-tree, linden-tree and birch-tree. In the Eaſt-Indies, they ſpin the bark of a certain tree into a ſtuff. They likewiſe mix it with ſilk in manufacturing the ſtuffs which go under the names of *nillacs*, *cherquemolles* and *fatalonges*.

BARK, or JESUIT'S BARK, is a name given by way of eminence to the quinquina. See the article QUINQUINA.

BARK, in navigation, a little veſſel with two or three triangular ſails; but, according to Guillet, it is a veſſel with three maſts, *viz.* a main-maſt, fore-maſt, and mizen-maſt. It carries about two hundred tons.

BARK LONGUE, or BARCA LONGA, a ſmall low ſharp-built, but very long veſſel without a deck. It goes with ſails and oars, and is very common in Spain.

BARKAN, a town of Hungary, remarkable for two victories, which the chriſtians obtained there over the Turks, the one in 1664, and the other in 1683.

BARKARY, a tan-houſe, or place for keeping bark.

BARK-BINDING, a diſtemper incident to trees, cured by ſlitting the bark, or cutting along the grain.

BARK-GALLING, is when trees are galled with thorns, *&c.* It is cured by binding clay on the galled places.

BARKHAMSTEAD, a market-town in the weſt part of Hertfordſhire, about eighteen miles weſt of Hertford, in 40′ weſt longitude, and 51° 40′ north latit.

BARKING, a fiſhing town of Eſſex, ſituated on the river Thames, about eight miles eaſt of London.

BARKING *of trees*, the peeling off the rind or bark.

This muſt be done, in our climate, in the month of May, becauſe at that time, the ſap of the tree ſeparates the bark from the wood. It would be very difficult to perform it at any other time of the year, unleſs the ſeaſon was extremely wet and rainy, for heat and drineſs are a very great hindrance to it.

BARKLEY, a market-town in Glouceſterſhire, about fifteen miles ſouth-weſt of Glouceſter: weſt longitude 2° 35′, and north latitude 51° 40′.

BARKWAY, a market-town of Hertfordſhire, under the meridian of London, and fifteen miles ſouth of Cambridge.

BARLEDUC, the capital of the dutchy of Bar. See the article BAR.

BARLEMONT, a town of Hainault, in the french Netherlands; ſituated on the river Sambre, about fifteen miles ſouth of Mons: eaſt longitude 3° 40′, and north latitude 50° 10′.

BARLERIA, a genus of plants of the *didynamia angioſpermia* claſs, the flower of

of which is monopetalous, and the fruit a capſule of a quadrangular figure, formed of two valves, with one cell, containing ſeveral plane orbiculated and imbricated ſeeds.

BARLETTA, a port-town of Barri, in the kingdom of Naples, ſituated on the gulph of Venice, twenty-two miles weſt of Barri, in 17° eaſt longitude, and 41° north latitude.

BARLEY, HORDEUM, in botany. See the article HORDEUM.

The ſeaſon for ſowing barley differs according to the nature of the ſoil and ſituation of the place; ſome ſowing in March, others in April, and ſome in May, yet with good ſucceſs.

The principal uſe of barley is for making beer: but beſides this, it is of conſiderable uſe in medicine, on account of its cooling and abſterſive qualities. Hence, a decoction of barley, eſpecially if a little nitre be diſſolved in it, is greatly recommended in ſlow fevers.

BARLEY-CORN, the leaſt of our long-meaſures, being the third of an inch.

BARM, otherwiſe called YEAST, the head or workings out of ale or beer.

BARNABITES, a religious order, founded in the ſixteenth century, by three italian gentlemen, who had been adviſed by a famous preacher of thoſe days to read carefully the epiſtles of St. Paul. Hence they were called clerks of St. Paul, and barnabites, becauſe they performed their firſt exerciſe in a church of St. Barnabas at Milan. Their habit is black, and their office is to inſtruct, catechiſe, and ſerve in miſſion.

BARNACLE, *bernicla*, in ornithology, a ſpecies of gooſe with a black beak, which is much ſhorter than in the common gooſe.

BARNACLE is alſo a ſpecies of ſhell-fiſh, otherwiſe called choncha anatifera. See the article CONCHA.

BARNACLES, in farriery, an inſtrument compoſed of two branches joined at one end with a hinge, to put upon horſes noſes when they will not ſtand quietly to be ſhod, blooded, or dreſſed.

BARNARD-CASTLE, a town of the biſhopric of Durham, in 1° 3′ weſt longitude, and 54° 26′ north latitude.

BARNET, a market-town of Middleſex (part of it in Hertfordſhire) ten miles north weſt of London, in 10′ weſt longitude and 51° 42′ north latitude.

BARNSTABLE, a port-town of Devonſhire; ſituated on the river Tau, about thirty miles north of Exeter: weſt longitude 4° 10′, and north latitude 51° 42′. It ſends two members to parliament.

BAROCHE, a port-town of the hither India, in the province of Cambaya; ſituated ſixty miles north of Surat: eaſt longitude 72° 5′ and north latitude 22° 15′.

BAROCO, in logic, a term given to the fourth mode of the ſecond figure of ſyllogiſms. A ſyllogiſm in baroco has the firſt propoſition univerſal and affirmative, but the ſecond and third particular and negative, and the middle term is the predicate in the two firſt propoſitions. For example:

Nullus homo non eſt bipes:
Non omne animal eſt bipes:
Non omne animal eſt homo.

BAROMETER, a machine for meaſuring the weight of the atmoſphere, and the variations therein, in order to determine the changes of the weather.

The barometer is founded on an experiment of Torricelli, who conſidering that a column of water of about thirty-three feet was equal in weight to a column of air of the ſame baſe, concluded that a column of mercury, no longer than about twenty-nine inches and a half would be ſo too, ſuch a column of mercury being as heavy as thirty-three feet of water. Accordingly he tried the experiment, and the apparatus he made uſe of is now the common barometer or weather-glaſs. It is conſtructed in the following manner: AB, (plate XXV. fig. 4. n°. 1.) a glaſs tube of thirty-four inches length, and ¼ of an inch in diameter hermetically ſealed at A, and open at B, is to be filled with quick-ſilver well defecated and purged of its air. The finger then being placed on the open end in immediate contact with the mercury, ſo as to exclude every particle of air, the tube is inverted and carefully immerſed, with the finger on the open end, into CD, a baſon of the ſame prepared mercury; then upon removing the finger, the mercury in the baſon will join that in the tube, and the ſaid column of mercury in the tube will be ſeen immediately to ſubſide, as in the figure; GH repreſents the ſurface of the mercury in the tube, and EF that of the mercury in the baſon.

This inſtrument is perhaps the beſt hitherto contrived for meaſuring the air's gravity, which that it may do to the greateſt perfection, it is neceſſary that there be a nonius applied to the index of a graduated plate, to meaſure more accurately the riſe and fall of the mercury.

A nonius, ſo called from the name of its inventor, is a ſmall plate ſo contrived as to ſlide by a graduated plate in ſuch a manner, that its index may be always ſet on one part to the ſurface of the mercury, and on the other end pointing to the diviſion in the ſcale of inches correſponding thereto. It is divided into ten equal parts, which together are equal to eleven of the diviſions of the ſcale, that is eleven tenths of an inch; and conſequently each ſmall diviſion of the nonius is equal to 1.1, two of them to 2.2, three of them to 3.3 of an inch, and ſo on. Whence it is eaſy to obſerve, that if the index points between any two diviſions of the ſcale, we need only look back to ſee what diviſion of the nonius coincides with a diviſion of the ſcale, and that will ſhew the number of tenths of a tenth; which is a great degree of exactneſs.

The mercury ſtanding at a leſs height, the nearer it is carried to the top of the atmoſphere, renders the barometer uſeful in determining the height of mountains, and finding out the different elevation of one place above another. Accordingly Dr. Halley, in the philoſophical tranſactions, ſhews how many feet each inch in the deſcent of the mercury anſwers to, as it is conveyed to any elevated place. See the article ATMOSPHERE.

But the principal uſe of it is to eſtimate the gravity of the air at different times, in order to foreſee the alterations of the weather; for which purpoſe the following moſt remarkable phænomena, relating to the riſing and falling of the mercury, are ſaid to be carefully obſerved. 1. The riſing of mercury preſages in general fair weather, and its falling foul weather. 2. In very hot weather, the falling of mercury foreſhews thunder. 3. In winter, the riſing preſages froſt, but in a continued froſt, it preſages ſnow. 4. When foul weather happens ſoon after the falling of the mercury, expect but little of it, and ſo on the contrary of fair weather. 5. But when the mercury continues to riſe for ſome time before the foul weather is over, expect a continuance of fair weather to follow. 6. In fair weather, when the mercury continues to fall before rain comes, then expect a great deal of wet, and probably high winds. 7. The unſettled motion of the mercury denotes uncertain and changeable weather.

From theſe obſervations it appears, that it is not ſo much the height of the mercury in the tube that indicates the weather, as the motion of it up and down; wherefore, in order to know whether the mercury is actually riſing or falling, the following rules are of uſe. 1. If the ſurface of the mercury is convex, it is a ſign that the mercury is then riſing. 2. If the ſurface is concave it is ſinking. 3. If the ſurface is plain, or rather a little convex, the mercury is ſtationary. 4. If the glaſs is ſmall, ſhake the tube, and if the air is grown heavier, the mercury will riſe about half the tenth of an inch; if it is growing lighter, it will ſink as much.

The uſefulneſs of barometers, and the advantage that would ariſe from perceiving the moſt minute variations in eſtimating the height of places, have given occaſion to the invention of ſeveral kinds of barometers, different from the torricellian or common one, though founded on the ſame principle. In all theſe, the artiſt's principal view has been to inlarge the ſcale of variation, which in the common one, is not above three inches.

The horizontal or rectangular barometer (ibid. n°. 2.) is hermetically ſealed at A, and filled with mercury from D to E; then as the upper ſurface of it riſes in the tube, ſuppoſe from E to F, the lower will be driven from D to G, as many times farther as this part of the tube is leſs than that at E. But it often happens, that ſome parts of the mercury break off from the reſt in the leg B C, and are left behind.

The diagonal barometer is repreſented by A B C, (ibid. n°. 3.) wherein the mercury, inſtead of riſing from B to D (ſuppoſe that ſpace to correſpond to the ſcale of variation in a ſtrait tube) will riſe from B to A, for it will always ſtand at the ſame perpendicular heighth, whatever be the inclination of the tube, becauſe fluids preſs only according to their perpendicular altitude. But the tube A B muſt not be too much inclined, leſt the mercury break in it, as in the former.

The wheel-barometer will be underſtood from (n°. 4. ibid.) where A B D is a tube filled with mercury from *a* to E, *a* being an iron ball ſwimming on the ſurface of the mercury: thus, as it ſubſides on the ſurface of the mercury, draws round the little wheel *m n*, to the circumference of which it is fixed by means of the ſtring *a c*. This wheel carries the index P Q, which points to the graduated edge of the circle K L, and by its motion, ſhews the

Fig. 1. BACK-STAFF.

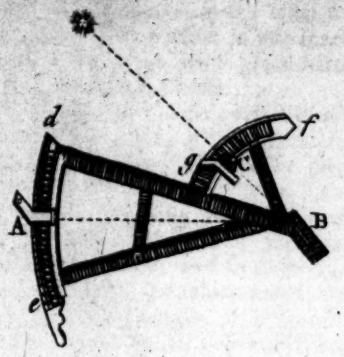


Fig. 2. BALLANCES.

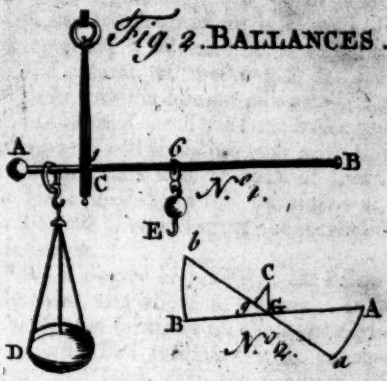


Fig. 3. BANDAGES.

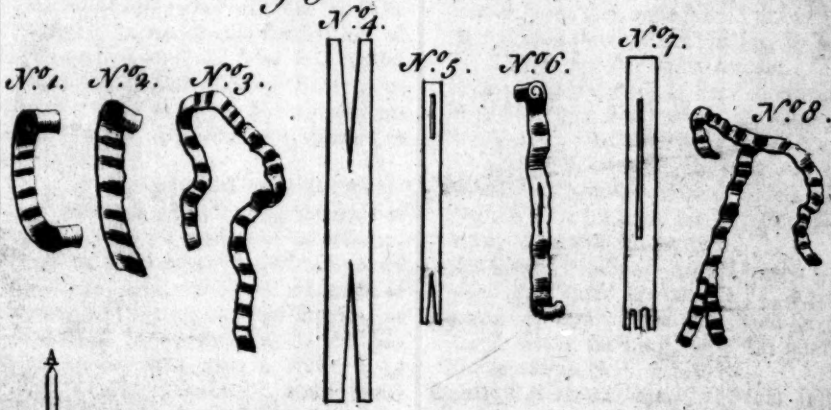
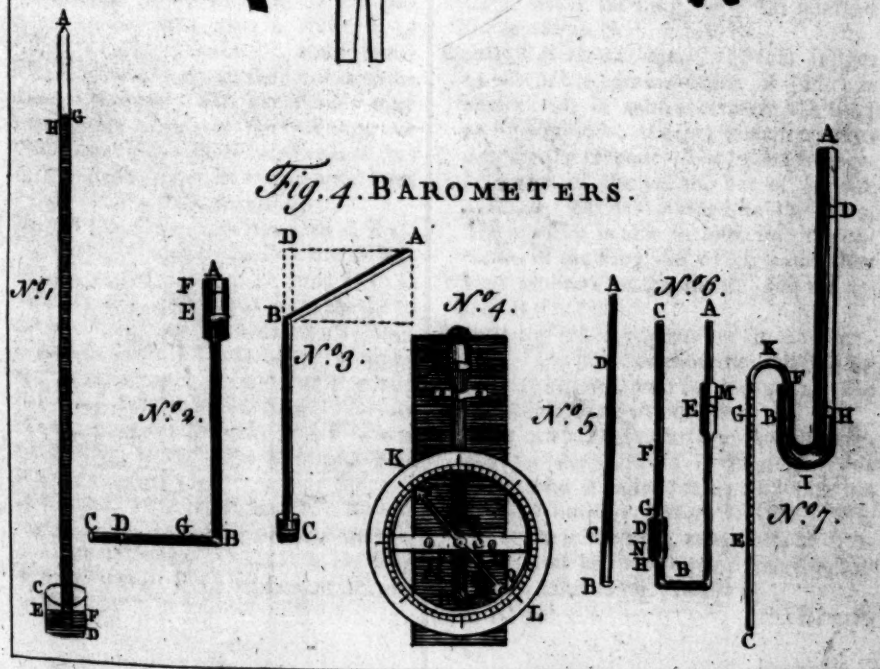


Fig. 4. BAROMETERS.



T. Jefferys sculp.

BRITISH MUSEUM

the moſt minute variations of the mercury. When the ball *a* is raiſed by the mercury on which it ſwims, the index is drawn on the contrary way by a leſſer ball *b*, which hangs on the other ſide of the wheel. The friction in this machine, unleſs it be made with great accuracy indeed, renders it uſeleſs.

The pendent barometer conſiſts of a ſmall conical tube (ibid. n°. 5.) hermetically ſealed at A, and filled with mercury from C to D, and empty from thence to A. Now ſuppoſing the gravity of the air increaſed, it will raiſe the mercury higher in the tube, and ſo force it into a narrower part; by which means the column becoming longer, its perpendicular preſſure upon the air below will be proportionably increaſed. On the contrary, when the air becomes lighter, the mercury deſcends into a larger part of the tube, and by that means has the length of its column proportionably contracted. But in this barometer either the tube muſt be very ſmall, in which caſe the friction of the mercury againſt the ſides will hinder it from riſing and falling freely; or when the tube is large, the air will get in, and be apt to divide the column in ſeveral places.

Theſe are the principal contrivances hitherto invented for inlarging the ſcale of variation in ſimple mercurial barometers. There are other inventions of compound barometers, *viz.* ſuch as are made of mercury and water, or other liquors, as the marine barometer and ſtatical barometer; but they are ſo difficult to make, ſo faulty when made, and ſo troubleſome to uſe, that we ſhall not deſcribe them. However, that the reader may have an idea of two of the beſt ſort, we ſhall preſent him with a deſcription of that of Des Cartes, and of that which owes its invention to Mr. Rowning.

That of Des Cartes is a bent tube A B C, (ibid. n° 6.) hermetically ſealed at A, filled with water from F to D, from D to E with mercury, and empty from thence to the top. Then, upon the mercury's riſing, ſuppoſe from E to M, and falling as much at D, the ſurface of the water at F would ſink ſo many times farther than the ſurface of the mercury at D as the tube C G was ſmaller than G H. But the water here is liable to evaporate.

A B C (ibid. n° 7.) repreſents Mr. Rowning's, and is a compound tube ſealed at A, and open at C, empty from A to D, filled with mercury, from thence to B, and from thence to E with water. Let G B H be an horizontal line, then it is plain, from the nature of the ſyphon, that all the compound fluid contained in the part from H to G, muſt ever be in equilibrio with itſelf, be the weight of the air what it will, becauſe the preſſure at H and G muſt be equal. Whence it is evident, that the column of mercury D H is in equilibrio with the column of water G E, and a column of air of the ſame baſe conjointly, and will therefore vary with the ſum of the variations of each of theſe. The great property of this barometer is, that the ſcale of variation may be increaſed *ad infinitum*.

BARON, a degree of nobility next below a viſcount, and above a baronet. It is probable that formerly all thoſe were barons, who had lordſhips with courts-baron, and ſoon after the conqueſt all ſuch ſat in the houſe of peers; but they being very numerous, it grew an order and cuſtom, that none ſhould ſit but ſuch as the king thought fit to call up by writ, which ran *pro hac vice tantum*. This ſtate of nobility being very precarious, they at length obtained of the king letters patent, and theſe were called barons by patent, or creation, the only way now in uſe of making barons, unleſs when the ſon of a lord, in his anceſtor's life-time, is ſummoned by writ.

On ſolemn occaſions, barons wear a coronet, repreſented in plate XXVI. fig. 2.

BARON *by tenure*, one who held certain territories of the king, who ſtill retained the tenure in chief to himſelf.

BARONS *of the exchequer*, the four judges to whom the adminiſtration of juſtice is committed, in cauſes between the king and his ſubjects, relating to matters concerning the revenue. They were formerly barons of the realm, but of late are generally perſons learned in the laws. Their office is alſo to look into the accounts of the king, for which reaſon they have auditors under them. See the article AUDITOR.

BARONS *of the cinqueports* are ſixteen members of the houſe of commons, elected by the cinqueports, two for each port. See the article CINQUEPORTS.

BARON AND FEME, in our law, a term uſed for the huſband in relation to his wife, who is called feme; and they are deemed but one perſon, ſo that a wife cannot be witneſs for, or againſt, her huſband, nor he for or againſt his wife, except in caſes of high treaſon.

BARON AND FEME, in heraldry, is when the coats of arms of a man and his wife are borne per pale in the ſame eſcutcheon, the man's being always on the dexter ſide, and the woman's on the ſiniſter; but here the woman is ſuppoſed not an heireſs, for then her coat muſt be borne by the huſband on an eſcutcheon of pretence. See the articles PALE and ESCUTCHEON *of pretence*.

Prender de BARON. See PRENDER.

BARONET, a modern degree of honour, next to a baron, created by king James I. in order to propagate a plantation in Ulſter, in Ireland, for which purpoſe each of them was to maintain thirty ſoldiers in Ireland, for three years, after the rate of eight pence ſterling per day to each ſoldier. The honour is hereditary, and they have the precedence of all knights, except thoſe of the garter, bannerets, and privy-counſellors. They are ſtiled baronets in all writs, and the addition of Sir is attributed to them, as the title of Lady is to their wives. No honour is to be created between barons and baronets.

BARONY, the honour and territory which gives title to a baron, whether he be a layman or a biſhop. See BARON.

According to Bracton, a barony is a right indiviſible; wherefore, if an inheritance is to be divided among coheirs, though ſome capital meſſuages may be divided, yet if the capital meſſuage be the head of a county or barony, it may not be parcelled; and the reaſon is, leſt by this diviſion many of the rights of counties and baronies by degrees come to nothing, to the prejudice of the realm, which is ſaid to be compoſed of counties and baronies.

The baronies belonging to biſhops are by ſome called regalia, as being held ſolely on the king's liberality.

In ſome caſes it is ſaid a barony may be aliened or intailed, and the honour paſs accordingly. A certain number of knight's fees antiently made a barony.

BAROSCOPE, the ſame with barometer. See the article BAROMETER.

BARR, or BAR. See the article BAR.

BARR-DICE, falſe dice, ſo contrived as not readily to turn up certain ſides.

BARRA, in commerce, a long meaſure uſed in Portugal and ſome parts of Spain, to meaſure woollen cloths, linen cloths, and ſerges. There are three ſorts, the barra of Valencia, 13 of which make 12 $\frac{6}{7}$ yards engliſh meaſure; the barra of Caſtile, 7 of which make 6 $\frac{3}{4}$ yards; and the barra of Aragon, 3 of which make 2 $\frac{4}{7}$ yards engliſh.

BARRA, in geography, one of the ſcotch weſtern iſlands, ſituated in 10° weſt lon. and 56° 40′ north latitude.

It is alſo the name of a kingdom in Africa.

BARRACAN, in commerce, a ſort of ſtuff, not diapered, ſomething like camblet, but of a coarſer grain. It is uſed to make cloaks, ſurtouts, and ſuch other garments, to keep off the rain.

BARRACKS, or BARACKS, places for ſoldiers to lodge in, eſpecially in garriſons. Dr. Pringle obſerves, that damp barracks are highly injurious to the health of thoſe lodged in them; and therefore ought to be altogether rejected, or remedied by ſome means or other.

BARRACOE, in ichthyology, the engliſh name of the ſmooth raja, with ſpines about the eyes, and three rows of them at the tail. See the article RAJA.

BARRATOR, in law, a common mover or maintainer of ſuits and quarrels, either in courts or elſewhere in the country. A man cannot be adjudged a barrater for bringing any number of ſuits in his own right, though they are vexatious. Barrators are puniſhed by fine and impriſonment.

BARRATRY, in law, ſignifies the fomenting quarrels and law-ſuits. See the preceding article.

BARRATRY, in a ſhip-maſter, is his cheating the owners. If goods delivered on ſhip-board, are embezzled, all the mariners ought to contribute to the ſatisfaction of the party that loſt his goods, by the maritime law; and the cauſe is to be tried in the admiralty. In a caſe, where a ſhip was inſured againſt the barratry of the maſter, *&c.* and the jury found that the ſhip was loſt by the fraud and negligence of the maſter, the court agreed that the fraud was barratry, tho' not named in the covenant; but that negligence was not.

BARRE, or BAR. See the article BAR.

BARREAUX-FORT, a fortreſs of Savoy, having Montmelian on the north, and Grenoble on the ſouth; ſituated in 5° 30′ eaſt lon. and 45° north latitude.

BARREL, in commerce, a round veſſel, extended more in length than in breadth, made of wood, in form of a little tun. See the article TUN.

It ſerves for holding ſeveral ſorts of merchandize.

Barrel

Barrel is alſo a meaſure of liquids. The engliſh barrel, wine meaſure, contains the eighth part of a tun, the fourth part of a pipe and one half of an hogſhead; that is to ſay, it contains thirty-one gallons and a half: a barrel, beer-meaſure, contains thirty-ſix gallons: and ale meaſure, thirty-two gallons. The barrel of beer, vinegar, or liquor preparing for vinegar, ought to contain thirty-four gallons, according to the ſtandard of the ale-quart.

BARREL alſo denotes a certain weight of ſeveral merchandizes, which differs according to the ſeveral commodities: a barrel of eſſex butter weighs one hundred and ſix pounds, and of ſuffolk butter, two hundred and fifty-ſix pounds. The barrel of herrings ought to contain thirty-two gallons wine-meaſure, which amount to about twenty-eight gallons old ſtandard, containing about a thouſand herrings. The barrel of ſalmon muſt contain forty-two gallons. The barrel of eels the ſame. The barrel of ſoap muſt weigh two hundred and fifty ſix pounds.

BARREL, in mechanics, a term given by watch-makers to the cylinder about which the ſpring is wrapped: and by gun-ſmiths to the cylindrical tube of a gun, piſtol, *&c.* through which the ball is diſcharged.

BARREL, in anatomy, a pretty large cavity behind the tympanum of the ear, about four or five lines deep, and five or ſix wide. It is lined with a fine membrane, on which there are ſeveral veins and arteries. In this cavity are four ſmall ſolid bones, not covered with a perioſteum, as the reſt of the bones of the body are.

Thundering BARRELS, in the military art, are filled with bombs, grenades, and other fire-works, to be rolled down a breach.

BARRELING, the putting certain commodities into barrels: thus we ſay, to barrel ſalmon, herring, *&c.* See the articles SALMON and HERRING.

BARRENNESS, the ſame with ſterility. See the article STERILITY.

BARRERIA, in botany, a genus of the *pentandria-tetragynia* claſs of plants, the corolla whereof is compoſed of five oval petals, with very long filiform ungues; the antheræ are ſimple; the germen is rude, immerſed in the cup, and quinquefid; the ſtyles are five, they are filiform, and of the length of the ſtamina; the ſtigmata are obtuſe.

BARRI, a city of the kingdom of Naples, and capital of a province of the ſame name, ſituated on the gulph of Venice, in 17° 40′ eaſt long. and 40° 40′ north lat.

BARRICADE, or BARRICADO, a warlike defence, conſiſting of empty barrels and ſuch like veſſels, filled with earth, ſtones, carts, trees cut down, againſt an enemy's ſhot, or aſſault; but generally trees cut with ſix faces, which are croſſed with battoons as long as a half-pike, bound about with iron at the feet.

BARRIER, in fortification, a kind of fence made at a paſſage, retrenchment, *&c.* to ſtop up the entry thereof, and is compoſed of great ſtakes, about four or five feet high, placed at the diſtance of eight or ten feet from one another, with tranſums, or over-thwart raſters, to ſtop either horſe or foot, that would enter or ruſh in with violence; in the middle is a moveable bar of wood, that opens and ſhuts at pleaſure. A barrier is commonly ſet up in a void ſpace, between the citadel and the town, in half-moons, *&c.*

BARRIER has been alſo uſed to ſignify a martial exerciſe of armed men, fighting together with ſhort ſwords, within rails or bars, which incloſed them.

BARRING *a vein*, in farriery, an operation performed upon the veins of a horſe's legs, and other parts of his body, with intent to ſtop the courſe, and leſſen the quantity of the malignant humours that prevail there.

It is done by opening the ſkin above the part, and, after diſengaging it, and tying it both above and below, ſtriking between the two ligatures. When horſes have got traverſe mules, or kibed heels, and rat tails, or arreſts in the hinder legs, it is common to barr a vein.

BARRISTER, in common law, a perſon qualified and impowered to plead and defend the cauſe of clients, in the courts of juſtice. They are of two ſorts, the outward, or outer barriſters, who, by their long ſtudy in, and knowledge of, the law, which muſt be for a term of ſeven years at leaſt, are called to public practice, and always plead without the bar. The inner barriſters are thoſe who, becauſe they are either attorney, ſolicitor, ſerjeant, or council to the king, are allowed, out of reſpect, the privilege of pleading within the bar. But at the rolls, and ſome other inferior courts, all barriſters are admitted within the bar.

Barriſters, in the engliſh law, amount to the ſame with licentiates and advocates in other countries, and courts, where the civil, *&c.* laws obtain.

BARROW, in the ſalt-works, wicker

caſes, almoſt in the ſhape of a ſugar-loaf, wherein the ſalt is put to drain.

BARROW, alſo denotes a large hillock, or mount of earth or ſtones, raiſed, by the the antients, as a ſepulchral monument, more eſpecially over their illuſtrious dead. Theſe barrows were, by the Romans, called *tumuli*, and are ſtill to be ſeen in great numbers in almoſt all parts of Britain, Ireland, and the britiſh Iſles, as well as in ſeveral other countries. Some of theſe barrows appear rude and tumultuary; others are more regular, and trenched round: ſome are the ſepulchral monuments of antient Britons; others of Romans, and others of Saxons and Danes. In ſome have been found urns, aſhes, and calcined bones; in others human ſkeletons.

BARRULET, in heraldry, the fourth part of the bar, or the one half of the cloſſet: an uſual bearing in coat-armour.

BARRULY, in heraldry, is when the field is divided bar-ways, that is acroſs from ſide to ſide, into ſeveral parts. See plate XXVI. fig. 5.

BARRY, in heraldry, is when an eſcutcheon is divided bar-ways, that is acroſs from ſide to ſide, into an even number of partitions, conſiſting of two or more tinctures, interchangeably diſpoſed: it is to be expreſſed in the blazon by the word *barry*, and the number of pieces muſt be ſpecified; but if the diviſions be odd, the field muſt be firſt named, and the number of bars expreſſed.

BARRY-BENDY is when an eſcutcheon is divided evenly, bar and bend-ways, by lines drawn tranſverſe and diagonal, interchangeably varying the tinctures of which it conſiſts. See plate XXVI. fig. 6.

BARRY-PILY is when a coat is divided by ſeveral lines drawn obliquely from ſide to ſide, where they form acute angles.

BARSANIANS, in church-hiſtory, certain heretics, who maintained the errors of the gajanites, and made their ſacrifices conſiſt in taking wheat flour to their mouth, on the top of their finger.

BARSE, a name ſometimes given to the pearch.

BARTERING, in commerce, the exchanging of one commodity for another, or the trucking wares for wares, among merchants.

Bartering was the original and natural way of commerce, precedent to buying; there being no buying till money was invented, though, in exchanging, both parties are buyers and ſellers. The only difficulty in this way of dealing lies in the due proportioning the commodities to be exchanged, ſo as that neither party ſuſtain any loſs.

The following example will ſufficiently explain the method of proportioning the commodities. Two merchants *A.* and *B.* barter; *A.* would exchange 5 *C.* 3 quarters 14 lb. of pepper, worth 3 *l.* 10 *s.* per *C.* with *B.* for cotton worth 10 *d.* per pound; how much cotton muſt *B.* give *A.* for his pepper?

In order to ſolve this queſtion, and all others of the ſame nature, we muſt firſt find, by proportion, the true value of that commodity whoſe quantity is given; which, in the preſent caſe, is pepper: and then find how much of the other commodity will amount to that ſum, at the rate propoſed.

Firſt, to find the value of the pepper, ſay As 1 *C.* is to 3 *l.* 10 *s.* ſo is 5 *C.* 3 quarters 14 lb. to 20 *l.* 11 *s.* 3 *d.* the true value of the pepper.

Then it is eaſy to conceive that *A.* ought to have as much cotton at 10 *d.* per pound, as will amount to 20 *l.* 11 *s.* 3 *d.* which will be found by the following proportion.

As 10 *d.* is to 1 lb. ſo is 20 *l.* 11 *s.* 3 *d.* to 4 *C.* 1 quarter 17 ½ lb.—And ſo much cotton muſt *B.* give *A.* for his 5 *C.* 3 quarters 14 lb. of pepper.

BARTHOLOMEW, or ST. BARTHOLOMEW, one of the Caribbee iſlands, ſituated in 62° 5′ weſt longit. and 18° 6′ north latitude.

BARTON, a market-town in Lincolnſhire, ſituated on the ſouthern ſhore of the Humber, thirty miles ſouth-eaſt of York, in 15′ weſt long. and 53° 45′ north lat.

BARTON is alſo uſed, in the weſt of England, for the demeſne lands of a manor; alſo for the manor-houſe; and in ſome parts for out-houſes, *&c.*

BARTRAMIA, in botany, is a genus of the decandria monogynia claſs of plants, the calyx of which is a perianthium, cut into five parts: the corolla conſiſts of five wedge-ſhaped petals; the fruit is globular, and the ſeeds are four in number, convex on one ſide, and angular on the other.

BARTSIA, in botany, a genus of the *didynamia-angioſpermia* claſs of plants, whoſe flower conſiſts of one petal, having the upper lip longeſt; the ſeeds are numerous, ſmall, angular, and incloſed in capſules.

BARUTH, an indian meaſure, containing ſeven-

ſeventeen gantans: it ought to weigh about three pounds and an half of engliſh avoirdupois.

BARULES, in church-hiſtory, certain heretics, who held that the ſon of God had only a phantom of a body; that ſouls were created before the world, and that they lived all at one time.

BARYTONUM, in the italian muſic, the ſame with our baſs. See the article BASS.

BASS-RELIEF. See the article BASSO-RELIEVO.

BASALTES, in natural hiſtory, called alſo *coticula*, *lapis heraclius*, and *lapis lydius*, a kind of marble, of a very fine texture of a deep gloſſy black, reſembling that of poliſhed ſteel, and mixed with no other colour, nor any extraneous matter of any kind. The moſt remarkable quality of this marble is its figure, being never found in ſtrata, like other marbles, but always ſtanding up in the form of regular angular columns, compoſed of a number of joints, one placed on, and nicely fitted to another, as if formed by the hands of a ſkilful workman. It is remarkably hard and heavy, will not ſtrike fire with ſteel, and is a fine touch-ſtone. See plate XXVI. fig. 7. The baſaltes was originally found in columns in Ethiopia, in fragments in the river Tmolus, and ſome other places; we now have it frequently, both in columns and ſmall pieces, in Spain, Ruſſia, Poland, near Dreſden, and in Sileſia; but the nobleſt ſtore in the world ſeems to be that called the Giant's cauſe-way, in Ireland, where it riſes far up in the country, runs into the ſea, croſſes its bottom, and riſes again on the oppoſite land.

BASARUCO, in commerce, a ſmall baſe coin in the Eaſt-Indies, being made only of very bad tin. There are, however, two ſorts of this coin, a good and a bad, which is $\frac{1}{6}$ in value lower than the good.

BASE, in geometry, the loweſt ſide of the perimeter of a figure: thus, the baſe of a triangle may be ſaid of any of its ſides, but more properly of the loweſt, or that which is parallel to the horizon. In rectangled triangles, the baſe is properly that ſide oppoſite to the right angle. See the article HYPOTHENUSE.

BASE *of a ſolid figure*, the loweſt ſide, or that on which it ſtands; and if the ſolid has two oppoſite parallel plane ſides, and one of them is the baſe, then the other is called the baſe alſo.

BASE *of a conic ſection*, a right line in the hyperbola and parabola, ariſing from the common interſection of the ſecant plane, and the baſe of the cone.

Altern BASE. See the article ALTERN.

BASE, in architecture, is uſed for any body which bears another, but particularly for the lower part of a column and pedeſtal. The baſe of a column is that part between the ſhaft and the pedeſtal, if there be any pedeſtal, or if there be none, between the ſhaft and the plinth, or zocle. The baſe is different in the different orders.

The tuſcan baſe is the moſt ſimple of all others, having only a ſingle tore. The doric baſe has an aſtragal more than the tuſcan, and that was introduced by the moderns. The ionic baſe has a large tore over two ſlender ſcotias, ſeparated by two aſtragals, according to Vitruvius. The corinthian baſe has two tores, two ſcotias, and two aſtragals. The compoſite baſe has an aſtragal leſs than the corinthian. The attic or atticurgic baſe, ſo called, becauſe it was introduced by the Athenians, has two tores and a ſcotia, and is a proper baſe for ionic and compoſite columns. See IONIC, DORIC, &c.

BASE RUDENTE'E, that which has its tores cut like cables.

BASE, in fortification, the exterior ſide of the polygon, or that imaginary line which is drawn from the flanked angle of a baſtion, to the angle oppoſite to it.

BASE, in gunnery, the leaſt ſort of ordnance, the diameter of whoſe bore is 1 $\frac{1}{4}$ inch, weight 200 pound, length 4 feet, load 5 pound, ſhot 1 $\frac{1}{2}$ pound wt. and diameter 1 $\frac{1}{8}$ inch.

BASE LINE, in perſpective, the common ſection of a picture, and the geometrical plane.

Diſtinct BASE, in optics. See FOCUS.

BASE *of the heart*, in anatomy, denotes its upper part.

The term baſe is ſometimes alſo uſed for the root of the os hyoides.

BASE, or BASS, in muſic. See BASS.

BASE, in law. Baſe eſtate, ſuch as baſe tenants have in their hands. Baſe tenure, the holding by villenage or other cuſtomary ſervices, as diſtinguiſhed from the higher tenures in capite, or by military ſervice. Baſe fee, is to hold in fee at the will of the lord, as diſtinguiſhed from ſoccage tenure. Baſe court, any court not of record.

BASE POINT, in heraldry. See POINT.

BASEMENT, in architecture, a baſe continued a conſiderable length, as round a houſe, room, &c.

BASHAW,

BASHAW, a turkiſh governor of a province, city, or other diſtrict.

Baſhaws include beglerbegs, and ſometimes ſangiacbegs, though a diſtinction is ſometimes made, and the name baſhaw is appropriated to the middle ſort, or ſuch as have two enſigns or horſe-tails carried before them. Thoſe who have the honour of three tails, are called beglerbegs; and thoſe who have only one, ſangiacbegs.

The appellation baſhaw is given by way of courteſy, to almoſt every perſon of any figure at the grand ſignior's court.

BASIGLOSSUS, or BASIOGLOSSUS. See the article BASIOGLOSSUS.

BASIL, in geography, a city and canton of Switzerland, near the confines of Alſace, ſituated on both ſides the river Rhine.

The city is large, populous, and fortified; being ſituated in 7° 40′ eaſt longit. and 47° 40′ north latitude.

BASIL, in botany, the engliſh name of a genus of plants called by botaniſts *ocymum*. See the article OCYMUM.

BASIL, among joiners, the ſloping edge of a chiſſel, or of the iron of a plane, to work on ſoft wood: they uſually make the baſil twelve degrees, and for hard wood eighteen; it being remarked, that the more acute the baſil is, the better the inſtrument cuts; and the more obtuſe, the ſtronger and fitter it is for ſervice.

Order of St. BASIL, the moſt antient of all the religious orders, was very famous in the eaſt. It paſſed into the weſt about the year 1057, and was held in great eſteem, eſpecially in Italy. As to their rules, the italian monks of that order faſt every Friday in the year; they eat meat but three times a week, and then but once a day: they work all together at certain hours of the day: their habit is nearly like that of the benedictines, and they wear a ſmall beard like the fathers of the miſſion.

BASILARE OS, in anatomy, the ſame with *os ſphenoides*. See SPHENOIDES.

BASILIC, in antient architecture, a term uſed for a large hall, or public place, with iſles, porticos, galleries tribunals, &c. where princes ſat and adminiſtred juſtice in perſon. But the name has ſince been transferred, and is now applied to ſuch churches, temples, &c. which by their grandeur as far ſurpaſs other churches as princes palaces do private houſes: as alſo to certain ſpacious halls in princes courts, where the people hold their aſſemblies: and to ſuch ſtately buildings as the Palais at Paris, and the Royal-exchange at London, where merchants meet and converſe.

BASILICA, in anatomy, the interior branch of the axillary vein, running the whole length of the arm. See the articles AXILLARY and VEIN.

BASILICATE, a province of the kingdom of Naples, having the Terra di Barri on the north, and the province of Calabria on the ſouth.

BASILICI, a denomination given in the greek empire to thoſe who carried the emperor's orders and commands.

BASILICON, in pharmacy, an epithet for a great many compoſitions to be found in the antient medicinal writers: but it more particularly denotes an officinal ointment, compoſed of wax, reſin, pitch, and oil of olives, from thence called *tetrapharmacum*.

It is much uſed to incarnate wounds; though of late our ſurgeons begin to ſubſtitute, for ſuch intentions, dreſſings that are not ſo liable to produce fungoſities. See the article WOUND.

BASILICS, *baſilica*, a body of the roman laws, tranſlated into greek. The baſilics comprehend the inſtitutes, digeſts, code, novels, and ſome edicts of Juſtinian and other emperors.

BASILICUS, in aſtronomy, *cor leonis*, a fixed ſtar of the firſt magnitude in the conſtellation leo. See the article LEO.

BASILIDIANS, in church-hiſtory, a branch of gnoſtics, who maintained that Chriſt's body was only a phantom, and that Simon the Cyrenean ſuffered in his ſtead.

BASILISK, *baſiliſcus*, a fabulous kind of ſerpent, ſaid to be produced from a cock's egg, hatched by a ſerpent, and ſuppoſed to kill by its breath or ſight only.

BASILISK, in military affairs, a large piece of ordnance, being a forty-eight pounder, and weighing about ſeven thouſand two hundred pounds. The baſiliſks of the French are but ten feet long, thoſe of the Dutch fifteen.

BASINGSTOKE, a market-town of Hampſhire, about ſixteen miles north-eaſt of Wincheſter, in 1° 15′ weſt long. and 51° 20′ north latitude.

BASIOGLOSSUS, in anatomy, a muſcle ariſing from the baſe of the os hyoides, and running along the middle of the tongue towards its apex: with the aſſiſtance of the ceratogloſſus, it draws the tongue backward, and makes it ſhorter.

BASIS,

BASIS, BASE, in geometry. See BASE.

BASIS, among phyſicians, denotes the principal ingredients in compound medicines.

BASKET, a kind of veſſel made of twigs interwoven together, in order to hold fruit, earth, &c. It denotes an uncertain quantity, as a baſket of medlars is two buſhels; of aſa fœtida from twenty to fifty pounds weight.

BASKETS *of earth*, in the military art, called by the French *corbeilles*, are ſmall baſkets uſed in ſieges, on the parapet of a trench, being filled with earth. They are about a foot and a half high, about a foot and a half diameter at the top, and eight or ten inches at bottom, ſo that being ſet together, there is a ſort of embraſſures left at their bottoms, through which the ſoldiers fire, without expoſing themſelves.

BASKET-FISH, a kind of ſtar-fiſh caught in the ſeas of north America. See the article STAR-FISH.

BASKET-SALT, that made from ſalt-ſprings, being purer, whiter, and compoſed of finer grains than the common brine-ſalt.

BASKET-TENURE, a tenure of lands by the ſervice of making the king's baſkets.

BASKIRI, a country of muſcovitiſh Tartary, bounded on the north by the Tartars of Tumen, on the eaſt by Barabinſkoi, on the ſouth by the mountain Sortora, and on the weſt by the dutchy of Bulgaria.

BASON, *pelvis*, in anatomy. See the article PELVIS.

BASON, in hydraulics, a reſervoir of water, uſed for various purpoſes: thus we ſay, the baſon of a jet d'eau, the baſon of a fountain, and likewiſe the baſon of a port or harbour. See the article DOCK.

BASON *of a bath*, among the antients, that place into which they deſcended by ſteps, in order to bathe. Vitruvius calls it *labrum*.

The french architects diſtinguiſh baſons into different kinds, according to their figure or uſe; as *baſons a rigole*, or trenched baſons: *baſons en coquille*, in the form of a ſhell; and *baſons de partage*, diſtributing baſons.

BASON, in jewiſh antiquities, the laver of the tabernacle, made of the braſs looking-glaſſes belonging to thoſe devout women that watched and ſtood centinels at the door of the tabernacle.

BASON, in mechanics, a term uſed by glaſs-grinders for a diſh of copper, iron, &c. in which they grind convex glaſſes, as concave ones are formed on ſpheres: and by hatters for a round iron mould, in which they form the matter of their hats, and alſo for a leaden one for the brims of hats, having an aperture in the middle, of a diameter ſufficient for the largeſt block to go through.

BASONS *of a ballance*, the two ſcales or diſhes faſtened to the extremities of the ſtrings, the one to hold the weight, and the other the thing to be weighed.

Sale by the BASON, at Amſterdam, is a public ſale made by authority, over which preſides an officer, appointed by the magiſtrates. It is ſo called becauſe, before the lots are delivered to the higheſt bidder, they commonly ſtrike on a copper baſon, to give notice that the lot is going to be adjudged.

BASQUE, or LABOUR, the ſouth-weſt diviſion of the province of Gaſcony, in France.

BASS, in muſic, that part of a concert which is moſt heard, which conſiſts of the graveſt and deepeſt ſounds, and which is played on the largeſt pipes or ſtrings of a common inſtrument, as of an organ, lute, &c. or on inſtruments larger than ordinary, for that purpoſe, as baſs-viols, baſſoons, baſs-hautboys, &c. The baſs is the principal part of a muſical compoſition, and the foundation of harmony; for which reaſon it is a maxim among muſicians, that when the baſs is good, the harmony is ſeldom bad.

Thorough-BASS is the harmony made by the baſs-viols, or theorbo's continuing to play both while the voices ſing, and the other inſtruments perform their parts, and alſo filling up the intervals, when any of the other parts ſtop. It is played by cyphers marked over the notes, on the organ, ſpinet, harpſichord, &c. and frequently ſimply, and without cyphers, on the baſs-viol, and baſſoon.

Counter-BASS is a ſecond or double baſs, where there are ſeveral in the ſame concert.

BASS, in geography, an inacceſſible rock in the Edinburgh frith.

BASS, among gardeners, a ſoft kind of ſedge or ruſh uſed in binding plants, &c.

BASSAIM, or BACCEIM, a port-town of the hither India, ſubject to the Portugueſe, ſituated in 71° 5′ eaſt lon. and 19° 30′ north latitude.

BASSE, in ichthyology, a ſpecies of pearch, otherwiſe called *lupus marinus*, or the ſea-wolf.

BASSET, a game at cards, ſaid to have been

been invented by a noble Venetian, for which he was baniſhed.

The perſons concerned in it are a dealer, or banker, his aſſiſtant, who ſuperviſes the loſing cards, and the punter, or any one who plays againſt the banker.

BASSIGNY, the ſouth-eaſt diviſion of the province of Champaign, in France. See the article CHAMPAIGN.

BASSOON, a muſical inſtrument of the wind-ſort, blown with a reed, furniſhed with eleven holes, and uſed as a baſs in a concert of hautboys, flutes, &c.

To render this inſtrument more portable, it is divided into two parts, whence it is alſo called fagot. Its diameter at bottom is nine inches, and its holes are ſtopped like thoſe of a large flute.

BASSO-RELIEVO, or BASS-RELIEF, a piece of ſculpture, where the figures or images do not protuberate, jet, or ſtand out far above the plane on which they are formed.

Whatever figures or repreſentations are thus cut, ſtamped, or otherwiſe wrought, ſo that not the entire body, but only part of it is raiſed above the plane, are ſaid to be done in relief, or relievo: and when that work is low, flat, and but a little raiſed, it is called low relief; when a piece of ſculpture, a coin, or a medal, has its figure raiſed ſo as to be well diſtinguiſhed, it is called bold, and we ſay its relief is ſtrong.

BASS-VIOL, a muſical inſtrument of the like form with that of a violin, but much larger. It is ſtruck with a bow as that is, has the ſame number of ſtrings, and has eight ſtops, which are ſubdivided into ſemi-ſtops: its ſound is grave, and has a much nobler effect in a concert than that of the violin.

BASTARD, a natural child, or one born of an unmarried woman. By the laws of England, a baſtard is incapable of inheriting land, as heir to his father: nor can any one inherit land as heir to him, except the children of his own body, born in wedlock; for by order of law, a baſtard has no relation, of which it takes any notice, and he himſelf is accounted the firſt of his family. If a man marries a woman that is big with child by another, who was not her huſband, and the child is born within the eſpouſals, then it ſhall be deemed the child of the huſband, and no baſtard, though it were born but a day after the marriage: but this is underſtood when the parties are of age, and there is no apparent impoſſibility on the man's ſide. If a woman be with child by a man who afterwards marries her, and then the child is born, this child is no baſtard: but if a man hath iſſue by a woman, before marriage, and afterwards marries her, the firſt iſſue is a baſtard, by our laws, but legitimate by the civil law. If a woman elope from her huſband, and he be within the four ſeas, her iſſue ſhall not be a baſtard by our laws, though by the ſpecial law it ſhall: and if the wife continues in adultery, and has iſſue, it is a baſtard in our law. If the huſband and wife conſent to live ſeparate, and have iſſue afterwards, it ſhall be accounted legitimate, becauſe the acceſs of the huſband ſhall be preſumed: but if the contrary be found, it ſhall be a baſtard.

BASTARD is alſo uſed diminutively, to denote the imperfection or leſs value of things: thus we ſay, baſtard-ſcarlet, baſtard-ſaffron, &c.

BASTARDY, a defect of birth objected to one born out of wedlock, and is general or ſpecial: general baſtardy is a certificate from the biſhop of the dioceſe, to the king's juſtices, after enquiry made, whether the party is a baſtard or not, upon ſome queſtion of inheritance. Baſtardy ſpecial is a ſuit commenced in the king's courts, againſt a perſon that calls another baſtard.

Right of BASTARDY, in the french cuſtoms. The baſtards of a king of France are princes, when owned; thoſe of a prince, or nobleman, are gentlemen; and thoſe of a gentleman, are only plebeians, and pay taxes accordingly. By the french laws, baſtards cannot inherit before they are legitimated; nor have heirs, except their own children, begotten in wedlock: for want of theſe, their inheritance devolves on the king.

BASTERNA, a ſort of vehicle, much the ſame with our chariot, uſed by the antient roman ladies. This was a different carriage from the lectica, which it ſucceeded, inaſmuch as the lectica was borne on men's ſhoulders, whereas this was drawn by beaſts.

BASTIA, the chief city of the iſland of Corſica. It is a good port, ſituated on the north-eaſt part of the iſland, in 9° 40′ eaſt long. and 42° 20′ north lat.

BASTILE, a caſtle for ſtate priſoners in Paris, anſwering to the tower of London.

BASTIMENTOS, ſmall iſlands, on the coaſt of Darien, in ſouth America, lying a little to the eaſtward of Porto Bello.

BAS-

BASTION, in the modern fortification, a huge maſs of earth, faced uſually with ſods, ſometimes with brick, and rarely with ſtone, ſtanding out from a rampart, whereof it is a principal part, and is what, in the antient fortification, was called a bulwark, *propugnaculum*.

A baſtion conſiſts of two faces and two flanks; the faces include the angle of the baſtion, and their union makes the outmoſt, or the ſaliant angle, called alſo the angle of the baſtion; and the union of the two faces to the two flanks makes the ſide-angles, called alſo the ſhoulders, or epaules; and the union of the two other ends of the flanks to the two curtains makes the angles of the flanks.

In regard to the baſtion, the great rule is, that every part of it be ſeen, and defended from ſome other part: whence mere angles are not ſufficient, but flanks and faces are neceſſary. For the proportion of the faces, they are not to be leſs than twenty-four rhineland perches, nor more than thirty. The flanks of a baſtion, in caſe they ſtand at the ſame angle under the line of defence, are ſo much the better the longer they be; whence they muſt ſtand at right angles to the line of defence: and the diſpoſition of the flanks makes the principal part of fortification, as it is that on which the defence chiefly depends, and which hath introduced the various forms of fortifying. The angle of the baſtion muſt be more than ſixty degrees, otherwiſe it will be too ſmall to give room for guns, and will either render the line of defence too long, or the flanks too ſhort; ſo that it muſt be either a right angle, or ſome intermediate one between that and ſixty degrees; for it is diſputed, whether or no it ſhould exceed a right angle. See the article FORT.

Solid BASTIONS are thoſe that have the void ſpace within them filled up entirely, and raiſed of an equal height with the rampart.

Void and hollow BASTIONS are thoſe that are only ſurrounded with a rampart and parapet, having the ſpace within void and empty, where the ground is ſo low, that if the rampart be taken, no retrenchment can be made in the center, but what will lie under the fire of the beſiegers.

Flat BASTION is a baſtion built in the middle of the curtain, when it is too long to be defended by the baſtion at its extremes.

Cut BASTION is that whoſe point is cut off, and inſtead thereof has a re-entering angle, or an angle inwards with two points outwards, and is uſed, either when without ſuch a contrivance the angle would be too acute, or when water or ſome other impediment hinders the carrying on the baſtion to its full extent.

Compoſed BASTION is when two ſides of the interior polygon are very unequal, which makes the gorges alſo unequal.

Deformed BASTION is when the irregularity of the lines and angles makes the baſtion out of ſhape, as when it wants one of its demigorges, one ſide of the interior polygon being too ſhort.

Demi BASTION is compoſed of one face only, and but one flank, and a demigorge.

Double BASTION is that which is raiſed on the plane of another baſtion.

Regular BASTION is that which has its true proportion of faces, flanks, and gorges.

BASTION DE FRANCE, a fortreſs in the kingdom of Tunis, ſubject to France.

It is ſituated about eighty miles weſt of the city of Tunis, in 8° eaſt longit. and 36° 30′ north latitude.

BASSTOIGNE, a town of the Netherlands, in the province of Luxemburg, ſituated in 5° 26′ eaſt longitude, and 50° north latitude.

BASTON, in law, one of the ſervants to the warden of the fleet-priſon, who attends the king's courts with a red ſtaff, for taking into cuſtody ſuch as are committed by the court. He alſo attends on ſuch priſoners as are permitted to go at large by licence.

BASTON, or BATOON, in architecture, a moulding in the baſe of a column, called alſo a tore.

BASTON, or BATOON, in heraldry, a kind of bend, having only one third of the uſual breadth.

The baſton does not go from ſide to ſide, as the bend or ſcarf does, being in the form of a truncheon. Its uſe is a note or mark of baſtardy. See plate XXVI. fig. 8.

BASTONADE, or BASTINADO, a kind of puniſhment inflicted by beating the offender with a ſtick. This ſort of beating, among the antient Greeks and Romans, was the puniſhment commonly inflicted on criminals that were freemen, as that of whipping was on the ſlaves. We find ſome inſtances of this ſort of diſcipline among the Hebrews; and it is a penalty uſed in the eaſt even at this day.

BAT, *veſpertilio*, in zoology: See the article VESPERTILIO.

Sea-BAT, in ichthyology, the engliſh name of a ſpecies of *acarauna*, caught in the american ſeas.

BAT, BATE, or BATZ, a ſmall copper coin, mixed with a little ſilver, current in ſeveral cities of Germany: it is worth four crutzers. It is alſo a coin of Switzerland, current at five livres, or one hundred ſols, french money.

BATABLE GROUND, that land which lay between Scotland and England, when the kingdoms were diſtinct, to which both nations pretended a right.

BATACALO, a fort and town on the eaſtern coaſt of the iſland of Ceylon, in 81° eaſt longitude, and 8° north latit.

BATASECK, a town of the lower Hungary, ſituated on the Danube, about ſeventy miles ſouth of Buda, in 19° 45′ eaſt longitude, and 46° 30′ north latitude.

BATAVIA, the capital of all the dutch colonies and ſettlements in the Eaſt Indies. It is ſituated on the eaſt part of the iſland of Java, and has an excellent harbour, in 106° eaſt longit. and 6° ſouth latitude.

BATCHELOR, or BACHELOR, a man who ſtill continues in the ſtate of celibacy, or who was never married.

BATCHELOR was antiently a denomination given to thoſe who had attained to knighthood, but had not a number of vaſſals ſufficient to have their banner carried before them in the field of battle: or if they were not of the order of bannerets, were not of age to diſplay their own banner, but obliged to march to battle under another's banner. It was alſo a title given to young cavaliers, who having made their firſt campaign, received the military girdle accordingly. And it ſerved to denominate him who had overcome another in a tournament, the firſt time he ever engaged.

Knights BATCHELORS were ſo called, as being the loweſt order of knights, or inferior to bannerets.

BATCHELORS, in an univerſity-ſenſe, are perſons that have attained to the baccalaureat; or who have taken the firſt degree in the liberal arts and ſciences. Before a perſon can be admitted to this degree at Oxford, it is neceſſary that he ſtudy there four years; three years more may entitle him to the degree of maſter of arts; and in ſeven years more he may commence batchelor of divinity. At Cambridge the degrees are uſually taken much the ſame as at Oxford, excepting in law and phyſic, in either of which the batchelor's degree may be taken in ſix years. In France, the degree of batchelor of divinity is attained in five years ſtudy, that is, in two years of philoſophy, and three of divinity.

BAT-FOWLING, a method of catching birds in the night, by lighting ſome ſtraw, or torches, near the place where they are at rooſt; for upon beating them up, they fly to the flame, where being amazed, they are eaſily caught in nets, or beat down with buſhes fixed to the end of poles, *&c.*

BATH, *balneum*, a ſufficient quantity of water collected in ſome convenient receptacle, for people to waſh in, either for health or pleaſure.

Baths are diſtinguiſhed into natural and artificial, and natural again into hot and cold.

Hot BATHS, called by the antients thermæ, owe their origin partly to the admixture of ſulphureous particles, while the water is paſſing through its ſubterraneous canals, and partly to the fumes and vapours exhaling through the pores of the earth, where ſulphur is either pure or impure, as in coals, amber, iron, nitre, *&c.* The chief hot baths in our country are thoſe at Bath, near Wells, in Somerſetſhire; and thoſe at Buxton and Matlock, in Derbyſhire.

In the city of Bath are four hot baths: one triangular, called the croſs bath, the heat of which is more gentle than that of the reſt, becauſe it has fewer ſprings in it; the ſecond is the hot bath, which was formerly much hotter than the reſt, but it was then not ſo large as at preſent: the other two are the king and queen's bath, divided only by a wall; the laſt having no ſpring, but receiving its water from the king's bath: each of theſe is furniſhed with a pump, to throw out the water upon the diſeaſed, where that is required.

Theſe waters abound with a mineral ſulphur; they are hot, of a bluiſh colour, and ſtrong ſcent, and ſend forth a thin vapour: they do not paſs through the body like moſt other mineral waters: though, if ſalt be added, they purge preſently. On ſettlement, they afford a black mud, which is uſed by way of cataplaſm in aches, and proves of more ſervice to ſome than the waters themſelves: the like they depoſite on diſtillation, and no other: the croſs-bath preys on ſilver, all of them on iron, but none on braſs.

The uſe of theſe baths is found beneficial in diſorders of the head, as palſies, &c. in cuticular diſeaſes, as leproſies, &c. obſtructions and conſtipations of the bowels, the ſcurvy, and ſtone, and in moſt diſeaſes of women and children; they are uſed as a laſt remedy in obſtinate chronic diſeaſes, where they ſucceed well, if they agree with the conſtitution of the patient.

Of the three hot european waters of note, *viz.* Aix-la-Chapelle, Bourbon, and Bath, the firſt abounds more eminently in ſulphur, which makes its heat, nauſeouſneſs, and purgative faculty ſo great, that few ſtomachs can bear its heat and nauſeouſneſs, and fewer weak conſtitutions the violence of its purging.

The Bourbon are of a middle nature, between the Aix-la-Chapelle and the Bath waters; being leſs hot, nauſeous, and purgative than thoſe of Aix-la-Chapelle; but more ſo than the Bath waters. The Bath waters partake leſs of the ſulphur, and more of the ſteel, than thoſe two, and are of conſequence by far the moſt pleaſant and moſt effectual.

Cold BATHS were, by the antients, held in the greateſt eſteem; and though they were long baniſhed out of medicine, the preſent age can boaſt of abundance of noble cures performed by them, and ſuch as were long attempted in vain by the moſt powerful medicine.

The cold bath is ſerviceable in moſt chronic diſorders; it always acts the part of a diuretic, and will do more, eſpecially plunging over head in ſea water, in the cure of melancholy, madneſs and particularly that occaſioned by the bite of a mad dog, than any other medicine. There is nothing of greater uſe in the cure of frigidity, when occaſioned by exceſs of venery, than the cold bath. It contributes much to the cure of a gonorrhœa, and fluor albus; and is ſucceſsful in a palſy.

Artificial BATHS are various, according to the various occaſions: as aqueous baths, vaporous baths, dry baths, &c. Aqueous baths are made from common plants, and other emollient, reſolvent, and nervine ſubſtances; conſiſting ſometimes of milk and emollient herbs, with roſe-water, &c. when the deſign is to humectate, or when it is only to cleanſe, it conſiſts of bran and water alone; and when it is for an exceſſive pain or tumour, &c. in theſe caſes it conſiſts of a decoction of roots, plants, and ſome ſpirit of wine.

In vapour-baths, the deſign of which is to promote a perſpiration, the ſteam or fume of ſome decoction is received upon ſome part of the body for that purpoſe. In theſe baths, there is no part of the patient's body plunged into the decoction, only thoſe parts which require it, are properly diſpoſed to receive the ſteams of ſome proper fomentation. Of this kind are the bagnios, where perſons are made to ſweat by the heat of a room, and pouring on of hot water.

Vapour-baths are of ſingular ſervice in cold diſtempers, anaſarca's œdematous tumours, paralytic caſes, ſwellings of the teſticles, &c.

Dry baths are made of aſhes, ſalt, ſand, ſhreds of leather, &c.

This bath is ſucceſsful in provoking ſweat in a plentiful manner, the patient being placed conveniently for the reception of the fumes: it is found uſeful in removing old obſtinate pains, and is very effectual in venereal complaints.

BATH, *Balneum*, among chemiſts. See the article BALNEUM.

BATH, in hebrew antiquity, a meaſure of capacity, containing the tenth part of an omer, or ſeven gallons and four pints, as a meaſure for things liquid: or three pecks and three pints, as a meaſure for things dry.

BATH, in architecture, ſuperb buildings erected for the ſake of bathing.

Thoſe buildings, among the antients, were moſt pompous and magnificent; ſuch were thoſe of Titus, Paulus Emilius, and Diocleſian, whoſe ruins are ſtill remaining.

BATH, in geography, a city of Somerſetſhire, ſituated on the river Avon, ten miles eaſt of Briſtol: weſt longitude 2° 30′, and north latitude 51° 30′.

It has been long famous for its excellent baths.

Knights of the BATH, a military order in England, ſuppoſed to have been inſtituted by Richard the IId. who limited the number of knights to four: however, his ſucceſſor, Henry IV. increaſed them to forty-ſix. Their motto is *Tria juncta in uno*, ſignifying the three theological virtues.

This order received its denomination from a cuſtom of bathing before the knights received the golden ſpur. They wear a red ribband beltwiſe, appendant

to which is the badge or ſymbol of the order which is a ſceptre, roſe, thiſtle, and three imperial crowns conjoined within a circle, upon which circle is the motto, and all of pure gold. Each knight wears a ſilver ſtar of eight points upon the left breaſt of his upper garment.

The order of the bath, after remaining many years extinct, was revived under George the firſt, by a ſolemn creation of a great number of knights.

BATH-KOL, the daughter of a voice. So the Jews call one of their oracles, which is frequently mentioned in their books, eſpecially the Talmud, being a fantaſtical way of divination invented by the Jews themſelves, not unlike the *ſortes virgilianæ* of the heathens. However, the jewiſh writers call this a revelation from God's will, which he made to his choſen people, after all verbal prophecies had ceaſed in Iſrael.

BATH-METAL, a mixed metal, otherwiſe called prince's metal. See the article *Prince's* METAL.

BATH-WATER. See the article BATH.

BATHING, the waſhing, ſoaking, ſuppling, refreſhing, moiſtening, &c. the body or any part thereof, in water, liquor, &c. for pleaſure or health. See the article BATH.

Tho' bathing hath been uſed with advantage in moſt caſes, yet there is ſcarce any, but, in ſome circumſtances, it would be prejudicial: ſo that to apply it with the greateſt advantage, it will be neceſſary to enquire what alterations are made by it in a human body. It is well known that heat relaxes, and that cold, on the contrary, contracts and braces the bodies it is applied to: the effects of cold bathing is attributed not only to its chilneſs, and conſtringing power, but, in ſome meaſure to the weight of the water. For ſuppoſe a perſon immerged two feet, and the area of his ſkin fifteen feet, he ſuſtains a weight of water, added to that of the air, equal to 2280 *lib.* troy. Beſides, the water in bathing, enters the body, mixes with the blood, and dilutes all the juices.

BATHING A FALCON is when weaned from her ramage fooleries, ſhe is offered ſome water to bathe herſelf in a baſon, where ſhe may ſtand up to her thighs. By this means, ſhe gathers ſtrength and boldneſs.

BATHMUS, βαθμὸς, in anatomy denotes the cavity of a bone, fitted to receive the prominence of another bone.

BATMAN, in commerce, a kind of weight uſed at Smyrna, containing ſix okes of four hundred drams each, which amount to ſixteen pounds; ſix ounces, and fifteen drams of engliſh weight.

BATON, or BASTON. See BASTON.

BATRACHOMYOMACHIA, the battle of the frogs and the mice, the title of a fine burleſque poem, uſually aſcribed to Homer.

The ſubject of the work is the death of Pycharpax, a mouſe, ſon to Toxartes, who being mounted on the back of Phyſignathus, a frog, on her voyage to her palace, to which ſhe had invited him, was ſeized with fear, when he ſaw himſelf in the middle of the pond, ſo that he tumbled off and was drowned. Phyſignathus being ſuſpected to have ſhaken him off with deſign, the mice demanded ſatisfaction, and unanimouſly declared war againſt the frogs.

BATTALIA, denotes an army drawn up in order of battle. See the articles ARMY and BATTLE.

BATTALION, a ſmall body of infantry, ranged in form of battle, and ready to engage.

A battalion uſually contains from 5 to 800 men; but the number it conſiſts of is not determined. They are armed with firelocks (pikes being quite laid aſide) ſwords and bayonets; and divided into thirteen companies, one of which is grenadiers. They are uſually drawn up with three men in file, or one before another. Some regiments conſiſt but of one battalion, others are divided into four or five.

BATTATA, or POTATOE. See the article POTATOE.

BATTEL, a town of Suſſex, ſix miles north of Haſtings: eaſt longitude 35′, and north latitude 50° 55′.

BATTEN, a name that workmen give to a ſcantling of wooden ſtuff, from two to four inches broad, and about one inch thick; the length is pretty conſiderable, but undetermined.

This term is chiefly uſed in ſpeaking of doors and windows of ſhops, &c. which are not framed of whole deal, &c. with ſtyles, rails, and pannels like wainſcot, but are made to appear as if they were, by means of theſe battens, bradded on the plain board round the edges, and ſometimes croſs them, and up and down.

BATTENBURG, a town of dutch Guelderland, ſituated on the north ſhore of the

the river Maeſe, almoſt oppoſite to Ravenſtein: eaſt longitude 5° 30′, and north latitude 51° 45′.

BATTERING, the attacking a place, work, or the like, with heavy artillery. To batter in breach, is to play furiouſly on a work, as the angle of a half moon, in order to demoliſh and make a gape therein. In this they obſerve never to fire a piece at the top, but all at the bottom, from three to ſix feet from the ground.

The battery of a camp is uſually ſurrounded with a trench, and palliſadoes at the bottom, with two redoubts on the wings, or certain places of arms, capable of covering the troops which are appointed for their defence. See the article BATTERY.

BATTERING-PIECES, or pieces of battery. See the article CANNON.

BATTERING-RAM, in antiquity. See the article RAM.

BATTERING-RAMS, in heraldry, a bearing, or coat of arms, reſembling the military engine of the ſame name. See plate XXVI. fig. 9.

BATTERY, in the military art, a parapet thrown up to cover the gunners, and men employed about the guns, from the enemy's ſhot. This parapet is cut into embraſſures, for the cannon to fire through. The height of the embraſſures, on the inſide, is about three feet: but they go ſloping lower to the outſide. Their wideneſs is two or three feet, but open to ſix or ſeven on the outſide. The maſs of earth that is betwixt two embraſſures, is called the merlon. The platform of a battery is a floor of planks and ſleepers, to keep the wheels of the guns from ſinking into the earth; and is always made ſloping towards the embraſſure, both to hinder the reverſe, and to facilitate the bringing back of the gun.

BATTERY *of mortars* differs from a battery of guns, for it is ſunk into the ground, and has no embraſſures.

Croſs BATTERIES are two batteries, which play athwart one another, upon the ſame thing, forming there an angle, and beating with more violence and deſtruction; becauſe what one bullet ſhakes, the other beats down.

BATTERY *ſunk or buried*, is when its platform is ſunk, or let down into the ground, ſo that there muſt be trenches cut in the earth, againſt the muzzles of the guns, for them to fire out at, and to ſerve for embraſſures.

BATTERY *d'enfilade* is one that ſcours, or ſweeps the whole length of a ſtraight line.

BATTERY *en echarpe* is that which plays obliquely.

BATTERY *de reverſe*, that which plays upon the enemy's back.

Camerade BATTERY is when ſeveral guns play at the ſame time upon one place.

BATTERY, in law, the ſtriking, beating, or offering any violence to another perſon, for which damages may be recovered. But if the plaintiff made the firſt aſſault, the defendant ſhall be quit, and the plaintiff amerced to the king for his falſe ſuit.

Battery is frequently confounded with aſſault, tho', in law, they are different offences; for in the treſpaſs for aſſault and battery, one may be found guilty of aſſault, yet acquitted of the battery; there may therefore be aſſault without battery, but battery always implies an aſſault. See the article ASSAULT.

BATTER, a kind of paſte made up of flour, water, eggs, &c. to make cakes, puddings, &c.

BATTEURS *d'eſtrade*, or SCOUTS, are horſe-men ſent out before, and on the wings of an army, one, two, or three miles, to make diſcoveries.

BATTLE, a general engagement between two armies, in a country ſufficiently open for them to encounter in front, and at the ſame time; or, at leaſt, for the greater part of the line to engage.

Other great actions, though of a longer duration, and even attended with a greater ſlaughter, are only called fights.

The loſs of a battle frequently draws with it that of the artillery and baggage; the conſequence of which is, that as the army beaten cannot again look the enemy in the face, till theſe loſſes have been repaired, it is forced to leave the enemy a long time maſter of the country, and at liberty to execute all their ſchemes; whereas a great fight loſt, is rarely attended with the loſs of all the artillery, and ſcarce ever of the baggage.

Naval BATTLE, the ſame with a ſea-fight, or engagement between two fleets of men of war.

Before a naval battle, every ſquadron uſually ſubdivides itſelf into three equal diviſions, with a reſerve of certain ſhips, out of every ſquadron, to bring up their rear. Every one of theſe, obſerving a due birth and diſtance, are in the battle to ſecond one another; and the better to avoid confuſion and falling foul of each other,

other, to charge, discharge, and fall off, by threes or fives, more or less, as the fleet is greater or smaller. The ships of reserve are instructed either to succour and relieve those that are any way in danger; or to supply, and put themselves in the place of those that shall be made unserviceable.

As for a fleet consisting but of few ships, when obliged to fight in an open sea, it should be brought up to battle in only one front, with the chief admiral in the middle of them, and on each side of him the strongest and best provided ships of the fleet. See SIGNALS and BOARDING.

BATTLE is also used figuratively, for a representation of a battle in sculpture, painting, and the like.

Line of BATTLE, *order of* BATTLE, see the articles LINE and ARMY.

Square BATTLE. See SQUARE.

BATTLE-ROYAL, in cock-fighting, a fight between three, five, or seven cocks, all engaged together, so that the cock which stands longest, gets the day.

BATTLE-AX, *securis danica*, a kind of halbard, first introduced into England by the Danes.

BATTLEMENTS, in architecture, are indentures or notches in the top of a wall, or other building, in the form of embrasures, for the sake of looking through them.

BATTOLOGY, in grammar, a superfluous repetition of some words or things.

BATTON, BATOON, or BASTON. See the article BASTON.

BATTORY, in commerce, a name given by the Hanse towns to their country houses and warehouses in foreign countries. The principal battories were at London, Archangel, Novogrod, Lisbon, Venice, and Antwerp.

BATTUS, an order of penitents at Avignon, and in Provence, whose piety carries them to exercise very severe discipline upon themselves, both in public and private.

BATUECOS, or LOS BATUECOS, a people of Spain in the kingdom of Leon, that inhabit the mountains between Salamanca and Corica, and are thought to be descended from the Goths.

BATZ, a copper coin mixed with some silver, and current at different rates, according to the alloy, in Nuremberg, Basil, Fribourg, Lucerne, and other cities of Germany and Switzerland.

BAVARIA, one of the circles of the german empire, lying between Austria on the east, and Swabia on the west. The duke of Bavaria is one of the nine electors. See the article ELECTOR.

BAUHINIA, in botany, a genus of plants of the decandria-monogynia class, the flower of which consists of five lanceolated, undulated petals, with attenuated and reflex tops, the lower ones somewhat the larger, and standing on ungues of the length of the calyx; the fruit is a long cylindric legumen, having one cell, and containing numerous round compressed seeds, that run longitudinally along the pod.

BAVINS, in the military art, denote brush-faggots, with the brush at length.

BAUM, MELISSA, in botany. See the article MELISSA.

BAUTZEN, the chief town of Lusatia in Germany, about thirty-five miles north east of Dresden: east longitude 14° 30′, north latitude 51° 15′.

BAWD, a woman who keeps a bawdy-house, or who conducts criminal intrigues. See the next article.

BAWDY-HOUSE, a house of ill fame, to which lewd persons of both sexes resort, and there have criminal conversation.

The keeping a bawdy-house is a common nusance, not only on account that it endangers the public peace, by drawing together debauched and idle persons; and promoting quarrels, but likewise for its tendency to corrupt the manners of the people. And therefore, persons convicted of keeping bawdy-houses, are punishable by fine and imprisonment; also liable to stand in the pillory, and to such other punishment, as the court, at their discretion, shall inflict.

BAY, in geography, an arm of the sea, shooting up into the land, and terminating in a nook. It is a kind of lesser gulph, bigger than a creek, and is larger in its middle within than at its entrance. The largest and most noted bays in the world are those of Biscay, Bengal, Hudson's, Panama, &c.

BAY, among farmers, a term used to signify the magnitude of a barn, as if a barn consists of a floor and two heads, where they lay corn, they call it a barn of two bays. These bays are from fourteen to twenty feet long.

BAY denotes likewise a pond head, made to keep in store of water for driving the wheels of the furnace or hammer belonging to an iron-mill, by the stream that comes thence thro' a floodgate called the pen-stock.

BAY is alſo one of the colours of the hair of horſes, inclining to red, and coming pretty near the colour of a cheſnut. There are five different gradations of the bay colour, *viz.* cheſnut-bay, light-bay, yellow-bay or dun-bay, bloody-bay, which is alſo called ſcarlet-bay, and the brown-bay.

BAY, among huntſmen. Deer are ſaid to ſtand at bay, when after being hard run, they turn head againſt the hounds.

BAY-YARN, a denomination ſometimes given to woollen-yarn. See YARN.

BAY-TREE, } See the articles { LAURUS.
BAY-SALT, } { SALT.

BAYEUX, a city of Normandy, in France, about fifteen miles north-weſt of Caen; weſt longitude 50′, north latitude 49° 20′.

BAYONET, in the military art, a ſhort broad dagger, formerly with a round handle fitted for the bore of a firelock, to be fixed there after the ſoldier had fired; but they are now made with iron handles and rings, that go over the muzzle of the firelock, and are ſcrewed faſt, ſo that the ſoldier fires with his bayonet on the muzzle of his piece, and is ready to act againſt horſe.

BAYONNE, a large city of Gaſcony, in France, ſituated on the river Adour, near the bay of Biſcay, in 1° 20′ weſt longitude, and 43° 30′ north latitude.

BAYS, in commerce, a ſort of open woollen ſtuff, having a long knap, ſometimes friſed, and ſometimes not. This ſtuff is without wale, and is wrought in a loom with two treddles, like flannel. It is chiefly manufactured at Colcheſter and Bocking in Eſſex, where there is a hall called the Dutch bay-hall, or raw-hall. The exportation of bays was formerly much more conſiderable than at preſent, that the French have learned to imitate them. However, the Engliſh bays are ſtill ſent in great quantities to Spain and Portugal, and even to Italy. Their chief uſe is for dreſſing the monks and nuns, and for linings, eſpecially in the army. The looking-glaſs makers alſo uſe them behind their glaſſes, to preſerve the tin or quickſilver; and the caſe-makers to line their caſes. The breadth of bays is commonly a yard and a half, a yard and three quarters, or two yards, by 42 to 48 in length. Thoſe of a yard and three quarters are moſt proper for the ſpaniſh trade.

BAZAR, BAZARI, or BAZAARD, a place deſigned for trade among the eaſtern nations, particularly the Perſians, ſome of which are open at top, like the market places of Europe; others are covered with high vaulted ceilings, and adorned with domes to give light. In the firſt, they ſell only the leſs precious and moſt bulky commodities; whereas in the latter, are the ſhops of thoſe merchants who ſell jewels, rich ſtuffs, wrought plate, &c.

BAZAS, a town of Guienne, in France, about thirty miles ſouth of Bourdeaux: weſt lon. 25′, and north lat. 44° 20′.

BAZAT, or BAZA, in commerce, a long fine ſpun cotton, which comes from Jeruſalem, whence it is alſo called jeruſalem-cotton.

BDELLIUM, a gum reſin, ſomewhat reſembling myrrh in appearance, brought from the Levant. It is met with in ſingle drops, of a very irregular ſize, ſome of which are as large as a hazel nut. Its colour is duſky, and its taſte bitteriſh. People are no more agreed about the true nature of bdellium than they are about the manner how it is produced: and it is much doubted whether the bdellium of the antients be the ſame with the modern kind. It is allowed to be an emollient and diſcutient, and to be a powerful aperient and detergent, according to its age; for it is more ſo when new and freſh, than afterwards.

BEACHY-HEAD, a cape or promontory on the coaſt of Suſſex, between Haſtings and Shoreham.

BEACON, a public ſignal, to give warning againſt rocks, ſhelves, invaſions, &c. See the article SIGNALS.

It is made by putting pitch barrels upon a long pole, and they put upon an eminence, ſo as they may be ſeen afar off; for the barrels being fired, the flame, in the night-time, and the ſmoke, in the day, give notice, and in a few hours may alarm the whole kingdom, upon an approaching invaſion, &c.

BEACONAGE, a tax, or farm paid for the uſe and maintainance of a beacon. Trinity-houſe is empowered to levy this tax by act of parliament.

BEACONSFIELD, a market town of Buckinghamſhire, twenty-two miles weſt of London: weſt longitude 30′, and north latitude 51° 30′.

BEAD, a ſmall glaſs ball, made in imitation of pearl, and uſed in necklaces, &c.

BEAD, in architecture, a round moulding, commonly made upon the edge of a piece of ſtuff, in the corinthian and roman orders, cut or carved in ſhort emboſſments, like beads in necklaces.

Sometimes a plain bead is ſet on the edge

edge of each faſcia of an architrave, and ſometimes likewiſe an aſtragal is thus cut. A bead is often placed on the lining-board of a door-caſe, and on the upper edges of ſkirting-boards.

BEAD-PROOF, among diſtillers, a fallacious way of determining the ſtrength of ſpirits, from the continuance of the bubbles, or beads, raiſed by ſhaking a ſmall quantity of them in a phial. See PROOF.

BEAD-ROLL, among papiſts, a liſt of ſuch perſons for the reſt of whoſe ſouls they are obliged to repeat a certain number of prayers, which they count by means of beads.

BEADLE, a meſſenger, or apparitor of a court, who cites perſons to appear, and anſwer in the court to what is alledged againſt them.

BEADLE is alſo an officer at an univerſity, whoſe chief buſineſs it is to walk before the maſters with a mace, at all public proceſſions, *&c.*

BEAGLE, the name of a particular kind of hunting-dogs, of which there are ſeveral ſorts, *viz.* the ſouthern beagle, which is ſomething leſs than the deep-mouthed hound, and ſomething thicker and ſhorter; the fleet northern, or cat beagle, which is ſmaller, and of a finer ſhape than the ſouthern beagle, and is a hard runner: there is alſo a very ſmall beagle, not bigger than a lady's lap-dog.

BEAK, *roſtrum*, the bill or nib of a bird, from the form and ſtructure of which, Linnæus divides this whole family, or general claſs of animals, into ſix orders See BIRD and ORNITHOLOGY.

BEAK, in architecture, the ſmall fillet left on the head of a larmier, which forms a canal, and makes a kind of pendant.

Chin BEAK, a moulding the ſame as the quarter-round, except that its ſituation is inverted: this is very frequent in modern buildings, though few examples of it are found in the antient.

BEAK, or BEAK-HEAD, of a ſhip, that part without the ſhip, before the fore-caſtle, which is faſtened to the ſtem, and is ſupported by the main knee.

BEAKED, in heraldry, a term uſed to expreſs the beak or bill of a bird. When the beak and legs of a fowl are of a different tincture from the body, we ſay, beaked and membered of ſuch a tincture.

BEAKING, among cock-fighters, is when one cock holds another by his bill, and ſtrikes him with his ſpurs or gafflers at the ſame time.

BEAM, in architecture, the largeſt piece of wood in a building, which lies croſs the walls, and ſerves to ſupport the principal rafters of the roof, and into which the feet of theſe rafters are framed. No building has leſs than two of theſe beams, *viz.* one at each end. Into theſe the girders of the garret roof are alſo framed; and if the building be of timber, the teazle tenons of the poſts are framed into them. The proportion of beams in or near London, are fixed, by ſtatute, as follows: a beam fifteen feet long, muſt be ſeven inches on one ſide its ſquare, and five on the other: if it be ſixteen feet long, one ſide muſt be eight inches, the other ſix, and ſo proportionably to their lengths. In the country, where wood is more plenty, they uſually make their beams ſtronger.

BEAMS of a ſhip, are the great main croſs-timbers which hold the ſides of the ſhip from falling together, and which alſo ſupport the decks and orlops: the main beam is next the main maſt, and from it they are reckoned by firſt, ſecond, third beam, *&c.* the greateſt beam of all, is called the mid-ſhip beam. See SHIP.

BEAM COMPASS, an inſtrument conſiſting of a ſquare wooden or braſs beam, having ſliding ſockets, that carry ſteel or pencil points: they are uſed for deſcribing large circles, where the common compaſſes are uſeleſs.

BEAM, in heraldry, the term uſed to expreſs the main horn of a hart or buck.

BEAM, among hunters, the main ſtem of a deer's head, or that part which bears the antlers, royals, and tops.

BEAM is alſo the name of a ſort of fiery meteor in the ſhape of a pillar; alſo a ray of the ſun.

BEAM-FILLING, in building, the filling up of the vacant ſpace between the raiſon and roof, with ſtones or bricks laid between the rafters on the raiſon, and plaſtered on with loam, where the garrets are not pargeted or plaſtered, as in country places, where they do not parget or plaſter their garrets.

BEAM *of an anchor*, the longeſt part of it, called alſo the ſhank. See ANCHOR.

BEAM-FEATHERS, in falconry, the longeſt feathers of a hawk's wing.

BEAM-FISH, a ſea-monſter, like a pike, a dreadful enemy to mankind, ſeizing like a blood-hound, and never letting go, if he gets faſt hold. The teeth of this fiſh are ſo venomous, that unleſs an antedote be

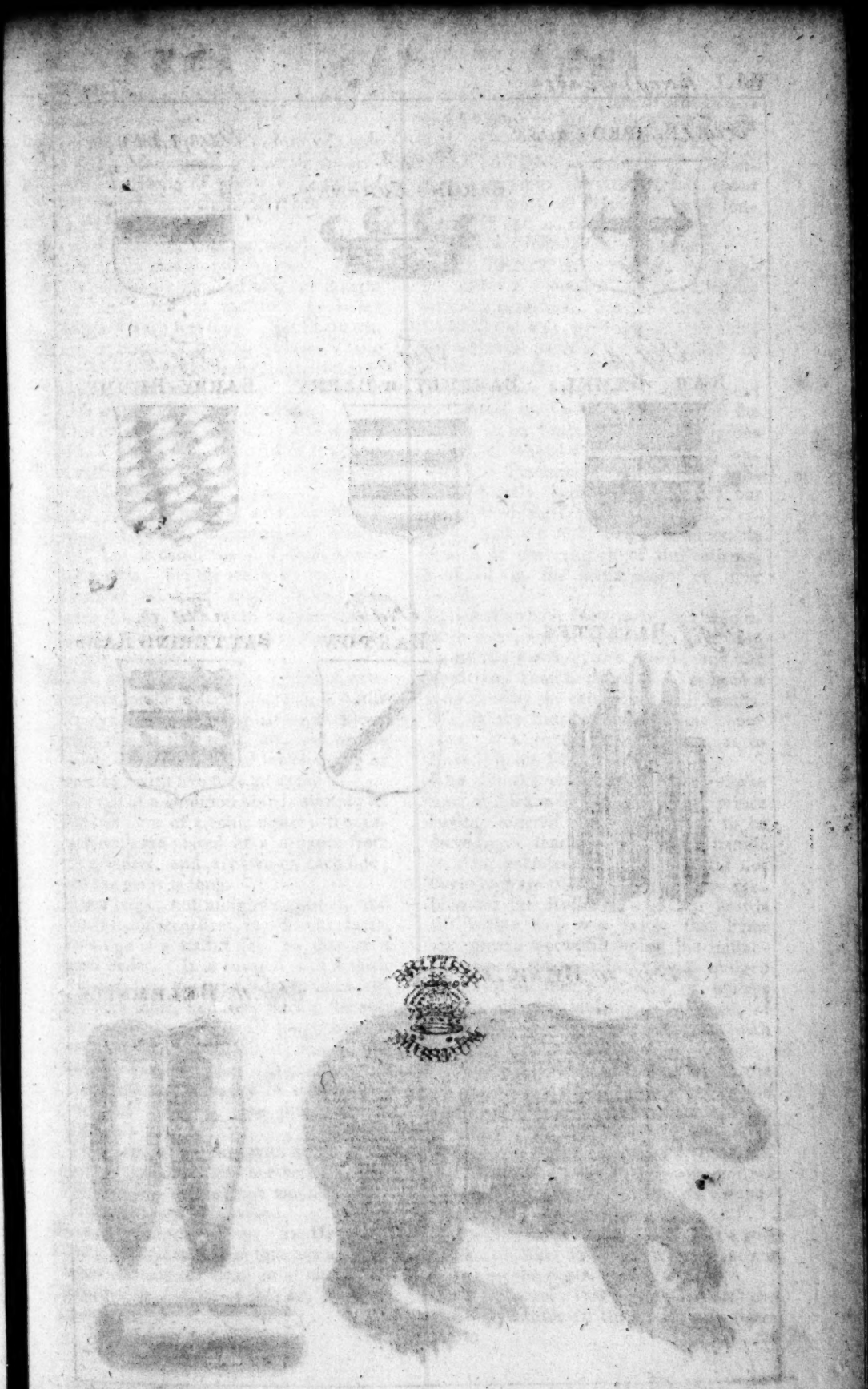


Fig. 1. BARBED *CROSS.*



Fig. 2.
BARON'S *CORONET.*



Fig. 3. BAR.



Fig. 4.
BAR GEMEL.



Fig. 5.
BARRULY, or BARRY.



Fig. 6
BARRY-BENDY.



Fig. 7. BASALTES.

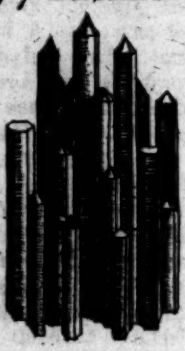


Fig. 8.
BASTON.



Fig. 9.
BATTERING RAMS.



Fig. 10. BEAR, *URSUS.*



Fig. 11. BELEMNITÆ.



J. Jefferys sculp

be immediately applied, the leaſt touch of them is mortal.

BEAM alſo denotes the lath, or iron, of a pair of ſcales; ſometimes the whole apparatus for weighing of goods is ſo called: thus we ſay, it weighs ſo much at the king's beam.

BEAM *of a plough*, that in which all the parts of the plough-tail are fixed.

It is commonly made of aſh, and is eight feet long, but in the four coultered plough it is ten feet long. See PLOUGH.

BEAM, or ROLLER, among weavers, a long and thick wooden cylinder, placed lengthways on the back part of the loom of thoſe who work with a ſhuttle.

That cylinder, on which the ſtuff is rolled as it is weaved, is alſo called the beam or roller, and is placed on the fore part of the loom.

BEAN, *faba*, in botany, makes a diſtinct genus of plants, according to Tournefort, but is comprehended by Linnæus under vicia. See the article VICIA.

Beans of all kinds ought to be ſown much thinner than is the common practice, by which means the produce will be greatly increaſed.

BEAR, *urſus*, in zoology, a genus of quadrupeds, of the order of the *feræ*, or beaſts of prey; diſtinguiſhed by having only four teats, two on the breaſt, and two on the belly; alſo feet formed for climbing or walking, with five toes on each.

The tail of a common bear is abrupt; its fore teeth are of a conic figure; the canine teeth are placed at a diſtance from the grinders, and are two on each ſide; and the penis is long.

It is a large, but unſightly animal, and grows to different ſizes, in different places, from that of a maſtiff dog, to that of a ſmall heifer. It is covered with a thick and deep fur; the head is large and long; the neck ſhort, and very thick; the eyes are ſmall, the thighs are long, but the under part of the legs ſhort, and it has a knee-pan at that joint. It is a native of America, and of many of the northern parts of Europe. See plate XXVI. fig. 10.

There is another bear, with an elongated tail, frequent in the northern parts of Europe, and is otherwiſe much the ſame with that already deſcribed.

BEAR, *urſa*, in aſtronomy. See URSA.

BEAR, in heraldry. He that has a coat of arms is ſaid to bear in it the ſeveral charges or ordinaries that are in his eſcutcheon.

BEAR, in gunnery. A piece of ordnance is ſaid to come to bear, when it lies right with, or directly againſt the mark.

BEARALSTON, a borough of Devonſhire, ſituated on the river Tamar, about ten miles north of Plymouth: weſt longitude 4° 30′, north latitude 50° 35′.

It ſends two members to parliament.

BEAR'S BREECH, in botany, the Engliſh name of a genus of plants called by botaniſts acanthus. See ACANTHUS.

BEARD, the hair growing on the chin, and adjacent parts of the face, chiefly of adults and males. See HAIR.

Various have been the ceremonies and cuſtoms of moſt nations in regard of the beard. The Tartars, out of a religious principle, waged a long and bloody war with the Perſians, declaring them infidels, merely becauſe they would not cut their whiſkers, after the rite of Tartary: and we find, that a conſiderable branch of the religion of the antients, conſiſted in the management of their beard.

Eccleſiaſtics have ſometimes been enjoined to wear, and at other times have been forbid the wearing, the beard; and the greek and romiſh churches have been a long time by the ears, about their beards.

To let the beard grow, in ſome countries, is a token of mourning, as to ſhave it is the like in others.

The Greeks wore their beards till the time of Alexander the great, that prince having ordered the Macedonians to be ſhaved, for fear it ſhould give a handle to their enemies: the Romans did not begin to ſhave till the year of Rome 454. Nor did the Ruſſians cut their beards till within theſe few years, that Peter the great, notwithſtanding his injunction upon them to ſhave, was obliged to keep on foot a number of officers to cut off, by violence, the beards of ſuch as would not otherwiſe part with them.

BEARD *of a comet*, the rays which the comet emits towards that part of the heaven to which its proper motion ſeems to direct it: in this the beard of a comet is diſtinguiſhed from the tail, which is underſtood of the rays emitted towards that part from whence its motion ſeems to carry it.

BEARDED HUSK, among floriſts, is a roſe huſk, or other ſuch like huſks that are hairy on the edges.

BEARD *of a horſe*, that part underneath the lower mandible on the outſide and above

the chin, which bears the curb. It is alſo called the chuck.

It ſhould have but little fleſh upon it, without any chops, hardneſs or ſwelling, and neither too high raiſed nor too flat, but ſuch as the curb may reſt in its right place.

BEARER, in a general ſenſe, one that carries burdens, letters, &c.

BEARER, in architecture, a poſt, or brick wall, trimmed up between the two ends of a piece of timber, to ſhorten its bearing, or to prevent its bearing with the whole weight at the ends only.

BEARER *of a bill of exchange*, the perſon in whoſe hands the bill is, and in favour of whom the laſt order was made.

When a bill is made payable to the bearer, it is underſtood to be payable to him in whoſe hands it is, after it becomes due. See the article BILL.

BEARERS, in heraldry. See the article SUPPORTERS.

BEARERS is alſo applied to thoſe who are appointed, by every pariſh, to carry the corps of dead perſons to the grave.

BEARING, in navigation and geography, the ſituation of one place from another, with regard to the points of the compaſs; or the angle which a line, drawn thro' the two places, makes with the meridians of each.

The bearings of places on the ground, are uſually determined from the magnetic needle, in the managing of which conſiſts the principal part of ſurveying, ſince the bearing or diſtance of a ſecond point from a firſt being found, the place of that ſecond is determined; or the bearings of a third point from two others, whoſe diſtance is known, being found, the place of the third is determined inſtrumentally. But to calculate trigonometrically, there muſt be more data.

BEARING, in the ſea language. When a ſhip ſails towards the ſhore, before the wind, ſhe is ſaid to bear in with the land or harbour. To let the ſhip ſail more before the wind, is to bear up. To put her right before the wind, is to bear round. A ſhip that keeps off from the land, is ſaid to bear off. When a ſhip that was to windward comes under another ſhip's ſtern, and ſo gives her the wind, ſhe is ſaid to bear under her lee, &c. There is another ſenſe of this word, in reference to the burden of a ſhip; for they ſay a ſhip bears, when having too ſlender or lean a quarter, ſhe will ſink too deep into the water with an over light freight, and thereby can carry but a ſmall quantity of goods.

BEARING *of a piece of timber*, among carpenters, the ſpace either between the two fixed extremities thereof, when it has no other ſupport, which they call bearing at length, or between one extreme and a poſt, brick wall, &c. trimmed up between the ends to ſhorten its bearings.

High BEARING *cock*, one larger than the cock he fights with.

BEARING *claws*, among cock-fighters, the foremoſt toes of a cock. If theſe are hurt or gravelled, he cannot fight.

BEARN, a province in the ſouth of France, bounded by Gaſcony on the north, and by the Pyrenean mountains, which ſeparate it from Spain, on the ſouth.

BEAST, *la bête*, among gameſters, a game at cards, played in this manner: the beſt cards are the king, queen, &c. whereof they make three heaps, the king, the play, and triolet.

Three, four, or five may play; and to every one is dealt five cards. However, before the play begins, every one ſtakes to the three heaps. He that wins moſt tricks, takes up the heap called the play: he that hath the king, takes up the heap ſo called; and he that hath three of any ſort, that is, three fours, three fives, three ſixes, &c. takes up the triolet-heap.

BEAST, in a general ſenſe, an appellation given to all four-footed animals, fit either for food, labour, or ſport.

BEASTS of burden, in a commercial ſenſe, all four-footed animals which ſerve to carry merchandizes on their backs. The beaſts generally uſed for this purpoſe, are elephants, dromedaries, camels, horſes, mules, aſſes, and the ſheep of Mexico and Peru.

BEASTS of the chace are five, *viz.* the buck, the doe, the fox, the roe, and the martin.

BEASTS and *fowls* of the warren are the hare, the coney, the pheaſant, and partridge.

BEASTS of the foreſt are the hart, hind, hare, boar, and wolf.

BEAT, in a general ſignification, ſignifies to chaſtiſe, ſtrike, knock, or vanquiſh.

This word has ſeveral other ſignifications in the manufactures, and in the arts and trades. Sometimes it ſignifies to forge and hammer, in which ſenſe ſmiths and farriers ſay, to beat iron; ſometimes it means to pound, to reduce into powder: thus we ſay, to beat drugs,

to

to beat pepper, to beat ſpices; that is to ſay, to pulveriſe them.

BEAT, in fencing, denotes a blow or ſtroke given with the ſword. See BEATING.

There are two kinds of beats; the firſt performed with the foible of a man's ſword on the foible of his adverſary's, which in the ſchools is commonly called *baterie*, from the French *batre*, and is chiefly uſed in a purſuit, to make an open upon the adverſary. The ſecond and beſt kind of beat is performed with the fort of a man's ſword upon the foible of his adverſary's, not with a ſpring, as in binding, but with a jerk, or dry beat; and is therefore moſt proper for the parades without or within the ſword, becauſe of the rebound a man's ſword has thereby from his adverſary's, whereby he procures to himſelf the better and ſurer opportunity of riſpoſting.

BEAT, in the manege. A horſe is ſaid *to beat the duſt*, when, at each ſtroke or motion, he does not take in ground or way enough with his fore-legs. He is more particularly ſaid to *beat* the duſt at *terra a terra*, when he does not take in ground enough with his ſhoulders, making his ſtrokes or motions too ſhort, as if he made them all in one place. He *beats the duſt* at curvets, when he does them too precipitately, and too low. He *beats upon a walk*, when he walks too ſhort, and thus rids but little ground, whether it be in ſtreight lines, rounds, or paſſings.

BEAT *upon the hand*, in the manege. See the article CHACK.

BEAT *of drum*, in the military art, is to give notice by beat of drum of a ſudden danger; or, that ſcattered ſoldiers may repair to their arms and quarters, is to beat an alarm, or to arms; alſo to ſignify, by different manners of ſounding a drum, that the ſoldiers are to fall on the enemy; to retreat before, in, or after an attack; to move, or march, from one place to another; to treat upon terms, or confer with the enemy; to permit the ſoldiers to come out of their quarters at break of day; to order to repair to their colours, *&c.* is to beat a charge, a retreat, a march, *&c.*

BEATER is applied, in matters of commerce, to divers ſorts of workmen, whoſe buſineſs is to hammer or flatten certain matters, metals, or the like.

In this ſenſe we meet with gold-beater, plaſter-beater, cement-beater, mortar-beater, *&c.*

BEATIFIC VISION. See VISION.

BEATIFICATION, among papiſts, an act by which the pope declares a perſon beatified, or bleſſed, after death.

This is the firſt ſtep towards canonization, and differs from it; becauſe in the former, the pope does not act as a judge, determining the ſtate of the beatified, but only gives a privilege to certain perſons to honour him by a particular religious worſhip, without incurring the penalty of ſuperſtitious worſhip: whereas in canonization, the pope ſpeaks like a judge, and determines upon the ſtate of the canonized.

No perſon can be beatified till fifty years after his or her death; all certificates or atteſtations of virtues and miracles are examined before the congregation of rites: the examination continues for ſeveral years, after which his holineſs decrees the beatification. The corps and relics of the future ſaint are thenceforth expoſed to the veneration of every body; his images are crowned with rays, and a particular office is ſet apart for him.

BEATING, in a general ſenſe, the chaſtizing, or puniſhing a perſon for a real or ſuppoſed offence.

BEATING, or PULSATION, in medicine, the reciprocal agitation, or palpitation of the heart, or pulſe. See PULSE.

There are ſome phyſicians that diſtinguiſh eighty-one different pulſations, and fifteen compound ones. They compute ſixty beats in the ſpace of one minute in a temperate man; but it is certain, that generally we find a greater number.

BEATING *gold and ſilver*. See GOLD.

BEATING with hunters, a term uſed of a ſtag, which runs firſt one way, and then another. He is then ſaid to beat up and down.

The noiſe made by conies in rutting time is alſo called beating or tapping.

BEATING, in fencing. See BEAT.

Beating differs from binding, as the latter is performed with a kind of ſpring, and that, in performing it, a man keeps by, and engages more his adverſary's ſword, than when he beats; for which reaſon binding is chiefly proper when a man intends to become the purſuer; whereas beating, being performed by a kind of jerk, or dry ſtroke, is chiefly deſigned for the defenſive part, or parade, that a man may hereby return the quicker riſpoſte from it; ſeeing his ſword, if the beat be rightly performed, will, in ſome meaſure, rebound from his adverſary's

ſword, and ſo aſſiſt him to make the quicker riſpoſte. Add, that the jerk or dry beat upon the parade forces the adverſary's ſword conſiderably out of the ſtreight line, which makes the riſpoſte ſtill the more certain, and which cannot be done with near that certainty nor ſtrength with the ordinary french parade, within and without the ſword from the quarte guard.

BEATING *time*, in muſic, a method of meaſuring and marking the time for performers in concert, by a motion of the hand or foot up and down ſucceſſively, and in equal times. Knowing the true time of a crotchet, and ſuppoſing the meaſure actually ſubdivided into four crotchets, and the half meaſure into two, the hand or foot being up, if we put it down with the very beginning of the firſt note or crotchet, and then raiſe it with the third, and then down with the beginning of the next meaſure; this is called beating the time; and by practice, a habit is acquired of making this motion very equal. Each down and up is ſometimes called a time, or meaſure.

The general rule is, to contrive the diviſion of the meaſure ſo, that every down and up of the beating ſhall end with a particular note, on which very much depends the diſtinctneſs, and, as it were, the ſenſe of the melody. Hence the beginning of every time, or beating in the meaſure, is reckoned the accented part thereof.

Beating time is denoted, in the Italian muſic, by the term *a battuta* which is uſually put after what they call *recitativo*, where little or no time is obſerved, to denote, that here they are to begin again to mark or beat the time exactly.

BEATS, in a watch or clock, are the ſtrokes made by the fangs or pallets of the ſpindle of the balance, or of the pads in a royal pendulum. To find the beats of the balance in all watches going, or in one turn of any wheel. Having found the number of turns which the crown-wheel makes in one turn of the wheel you ſeek for, thoſe turns of the crown-wheel multiplied by its notches, give half of the number of beats in that one turn of the wheel. For the balance or ſwing has two ſtrokes to every tooth of the crown-wheel, inaſmuch as each of the two pallets hath its blow againſt each tooth of the crown-wheel; whence it is that a pendulum that beats ſeconds has in its crown-wheel only thirty teeth.

To explain this, ſuppoſe the numbers of a ſixteen-hour watch, in which the pinion of report is 4, the dial-wheel 32, the great wheel 55, the pinion of the ſecond wheel 5, *&c.* The number of the notches in the crown-wheel 17 being multiplied into 6336 (the product ariſing from the continual multiplication of the quotients 8, 11, 9, 8) gives 107712 for half the number of beats in one turn of the dial-wheel; for 8 times 17 is 136, which is half the number of beats in one turn of the centrate wheel 40; and 9 times 136 is 1224, the half beats in one turn of the ſecond wheel; and 11 times 1224, is 13464, the half beats in one turn of the great wheel 55; and 8 times 13464 makes 107712. If you multiply this by the two pallets, that is, double it, the product will be 215424, which is the number of beats in one turn of the dial-wheel, or twelve hours.

```
4)32(8
5)55(11
5)45(9
5)40(8
  17
```

To know how many beats this watch has in an hour, divide the beats in twelve hours into twelve parts, and it gives 17952, the train of the watch, or beats in an hour. By the beats and turns of the fuſy, the hours that any watch will go, may be found thus. As the beats of the balance in one hour: are to the beats in one turn of the fuſy : : ſo is the number of the turns of the fuſy : to the continuance of the watch's going. Thus 20196 : 26928 : : 12 : 16.

To find the beats of the balance in an hour, the proportion is, as the hours of the watch's going, to the number of the fuſy : : ſo are the beats in one turn of the fuſy : to the beats in an hour. Thus, 16 : 12 : : 26928 : 20196.

BEAUCAIRE, a town of Languedoc, ſituated on the weſtern ſhore of the river Rhone, about ſeven miles north of Arles: eaſt longitude 4° 40′ and north latitude 43° 40′.

BEAUCE, the northern diviſion of the province of Orleanois, in France.

BEAVER, FIBER, in zoology, a genus of quadrupeds, of the order of the glires, called by Linnæus caſtor. See CASTOR. The beaver has two very different ſorts of hair, *viz.* one kind long and coarſe, and another ſoft and fine; and of this laſt it is, that the fine beaver-hats are manufactured.

BEAUFET, or BUFFET. See the article BUFFET.

BEAUFORT, a town of the dutchy of Anjou in France, ſituated fifteen miles eaſt

east of Angers: east longitude 15′, and north latitude 47° 30′.

BEAUFORT is also a town of Savoy, about thirty miles east of Chamberry: east longitude 6° 40′, and north latit. 45° 30′.

BEAUGENCY, a town of Orleanois, in France; situated on the river Loire, about fifteen miles south-west of Orleans, in 1° 36′ east long. and 47° 48′ north latitude.

BEAUJEU, a town of the Lyonois in France, about twenty-five miles north-west of Lyons: east longitude 4° 30′, and north latitude 46° 15′.

BEAUJOLOIS, the south-east division of the Lyonois, and so called from Beajeu.

BEAUMARIS, a market town of Anglesey in Wales; situated about nine miles north of Bangor, in 4° 15′ west longitude, and 53° 25′ north latitude.

BEAUMONT, a town of Hainalt, about seventeen miles south-east of Mons: east longitude 4° 15′ and north latitude 50° 20′.

BEAUMONT is also a town of France, about sixteen miles south of Alençon: east longitude 5′, and north latitude 48° 20′.

BEAU-PLEADER, a writ upon the statute of Marlbridge, whereby it is ordained, that no fine shall be taken of any person in any court, for fair-pleading; that is, for not pleading fairly, and to the purpose. Beau-pleadings is in respect to vicious pleadings.

BEAUTY, a general term for whatever excites in us pleasing sensations, or an idea of approbation.

Hence the notion annexed to beauty may be distinguished into ideas and sensations, the former of which occupy the mind; the latter affect the heart: thus, an object may please the understanding without interesting the sense; and on the other hand, we perceive agreeable sensations, excited by some objects, whose ideas are no way related to any thing that is praiseworthy.

It is, on account of these distinctions, that the difficulty lies of fixing an universal characteristic of beauty, in regard that the persons vary, according to their different turns of mind, and habitudes of body, and consequently the relations of objects to those ideas and sensations do in like manner vary; whence arise the different opinions of beauty in painting, women, &c.

BEAUTY, in architecture, painting, and other arts, is the harmony and justness of the whole composition taken together.

BEAUTY of Christ's person, among divines, has been a subject of great dispute in all ages of the church; some magnifying the external beauty of his body, others defending the literal meaning of Isaiah's description of the Messiah, as without form and comeliness.

BEAUVIN, a city of Burgundy, in France, about fifteen miles north of Chalons: east longitude 4° 50′, and north latitude 47°.

BEAUVOIR, a port-town of France, about twenty-five miles south-west of Nantz: west longitude 2° and north latitude 47°.

BEAUVOIS, a city of the isle of France, about forty-three miles north of Paris: east long. 2° 20′ and north lat. 49° 30′.

BECAH, or BEKAH, in hebrew antiquity, a jewish coin, equal to $13\frac{11}{16}$ d. of our money.

BECALM, in a general sense, signifies to appease, to allay.

BECALM, in the sea language. A ship is said to be becalmed, when there is not a breath of wind to fill the sails, which is occasioned either by its being taken off by the interposition of the shore, or for want of any wind stirring.

BECANER, the capital of the territory of Becar in India, situated on the river Ganges, in 83° east longitude, and 28° north latitude.

BECHICS, medicines designed to relieve coughs, being the same with what we call pneumonics, thoracics, expectorants, and pectorals. See the articles EXPECTORANTS and PECTORALS.

BED, a convenience for stretching and composing the body on, for ease, rest, or sleep, consisting generally of feathers inclosed in a ticken case. There are varieties of beds, as a standing bed, a setteebed, a tent-bed, a truckle-bead, &c.

All beds that are for sale, must be filled with one sort of stuffing only, on the pain of forfeiture; as the mixing of feathers, down, scalded feathers, dry pulled feathers, any ways together, is conceived to be contagious for a man's body to lie on. Also, bed-quilts, mattrasses, and cushions, stuffed with horse-hair, fen-down, goats-hair, and neats-hair, which are dressed in lime, and in which the heat of a man's body will exhale, and cause to yield a noxious smell, are prohibited by statute.

The antient Romans had various sorts of beds, for various purposes: they had their chamber-bed, whereon they slept; their table-bed, whereon they eat, as they always eat lying; there being usually three persons to one bed, whereof the middle place, as well as the middle bed, was accounted the most honourable: they had also

alſo the bed whereon they ſtudied, and that whereon the dead were carried to the funeral pile.

BED *of juſtice*, in the french cuſtoms, a throne upon which the king is ſeated, when he goes to the parliament. The king never holds a bed of juſtice unleſs for affairs that concern the ſtate, and then all the officers of parliament are cloathed in ſcarlet robes.

BED *of the carriage of a great gun*, a thick plank, that lies under the piece; being, as it were, the body of the carriage.

BED, in maſonry, a courſe, or range of ſtones; and the joint of the bed is the mortar between two ſtones, placed over each other.

BED, in gardening, thoſe ſquare or oblong pieces of ground, in a garden, raiſed a little above the level of the adjoining ground, and wherein they ſow ſeeds, or plant-roots.

Hot-BED. See the article HOT-BED.

BEDS *of minerals*, certain ſtrata or layers of matter diſpoſed over each other.

BED *of ſnakes*, a name given by hunters, to a knot of young ones.

BED-CHAMBER. See the articles CHAMBER and APARTMENT.

Lords of the BED-CHAMBER, in the britiſh cuſtoms, ten lords who attend in their turns, each a week; during which time they lie in the king's bed-chamber, and wait on him when he dines in private.

BEDAL, a market-town of Yorkſhire, eight miles ſouth of Richmond: weſt longit. 1° 20′, north latit. 54° 20′.

BEDEREPE, a cuſtomary ſervice, by which tenants were antiently bound to reap their landlord's corn in harveſt time.

BEDFORD, the county town of Bedfordſhire, ſituated on the river Ouſe, about twenty-two miles ſouth-weſt of Cambridge, in weſt longitude 20′, and north latitude 52° 10′.

BEDLAM, or BETHLEHEM. See the article BETHLEHEM.

BED MOULDING, in architecture, a term uſed for thoſe members of a corniche, which are placed below the coronet; and now a days a bed-moulding uſually conſiſts of an ogee, a liſt, a large boultine, and another liſt under the coronet.

BEDOUINS, in the arabian cuſtoms, tribes of Arabs, who live in tents, and are diſperſed all over Arabia, Ægypt, and the north of Africa.

BEDWIN, a borough-town of Wiltſhire, about eighteen miles north-weſt of Saliſbury, in weſt longitude 1° 40′, and north latitude 51° 25′.

BEE, *apis*, in zoology. See APIS.

Authors enumerate a great many ſpecies of this inſect, but the common hive-bee merits particular conſideration.

Theſe are of three ſorts, *viz.* 1. The queen-bee, which is ſomewhat larger, and of a brighter red than the reſt. Her buſineſs is to conduct a new ſwarm, and depoſit eggs for another brood; and ſo great is her fertility, that ſhe frequently brings forth many thouſands of young in a year. 2. The drones which have no ſtings, are of a darker colour than the reſt, and are thought to be the males. 3. The honey-bees, or working-bees, which are by far more numerous than the other two kinds.

Concerning the breeding and management of bees, together with the produce of their induſtry, ſee the articles SWARM, HIVE, HIVING, HONEY, WAX, &c.

BEE-EATER, *merops*, in zoology. See the article MEROPS.

BEE-FLY, or DRONE-FLY. See the article DRONE-FLY.

BEECH, *fagus*, in botany. See FAGUS.

The wood of the beech-tree is of a whitiſh-colour, and much coveted by turners for making ladles, trays, bellows, &c.

BEECH-GALLS, hard protuberances found on the leaves of the beech, wherein are lodged the maggots of a certain fly.

BEECH-MAST, the fruit of the beech-tree, ſaid to be good for fattening hogs, deer, &c.

BEECH-OIL, an oil drawn by expreſſion, from the maſt of the beech-tree, after it has been ſhelled and pounded.

This oil is very common in Picardy, and uſed there, and in other parts of France, inſtead of butter; but moſt of thoſe who take a great deal of it, complain of pains and a heavineſs of the ſtomach.

BEELE, a kind of pick-ax, uſed by the miners for ſeparating the ores from the rocks in which they lie: this inſtrument is called a tubber by the miners of Cornwall.

BEER, a common and well-known liquor, made with malt and hops, and uſed in thoſe parts of Europe where vines will not grow, and where cyder is ſcarce. See the articles MALT, BREWING, &c.

It is chiefly diſtinguiſhed from ale by the quantity of hops, which is greater in beer, and thereby renders the liquor bitterer, and fitter to keep.

There are various differences in beer, pro-

proceeding from the ways of brewing, from the different countries or climates, from the water that is uſed, from the time ſpent about it, from the ingredients made uſe of, and the proportions of theſe ingredients.

That beer is reckoned the beſt which is clear, and of a pale colour, of a pungent and agreeable taſte, that ſparkles upon being poured into a glaſs, and is neither too old or too new.

Aigre-BEER is uſed by callico-printers, chemiſts, lapidaries, ſcarlet-dyers, vinegar-merchants, and white lead men.

Bottling of BEER is beſt performed in this manner: Firſt, take clear water, or ſuch as has been well impregnated with the eſſence of ſome herb; to every quart of which add half a pound of ſugar. Afterwards, having cauſed this water to be gently boiled and ſcummed, add a few cloves: let it cool in order to have barm or yeaſt put to it, and being brought to work, take off the ſcum again. That done, while it is in a ſmiling condition, put three ſpoonfuls into each bottle; which is to be filled up with beer, and ſecurely corked. A few cryſtals of tartar do alſo very well in bottled beer; eſpecially if a few drops of the eſſence of barley, wine, or ſome eſſential ſpirits be added.

BEER, among weavers, a term that ſignifies nineteen ends of yarn, running all together the whole length of the cloth.

BEER-MEASURE. See the article MEASURE.

BEESTINGS, a term uſed by country-people for the firſt milk taken from a cow after calving.

BEET, *beta*, in botany, a genus of plants, of the *pentandria-digynia* claſs, with no flower-leaves: the fruit is a capſule placed within the baſe of the cup, with one cell, containing a ſingle kidney-ſhaped compreſſed ſeed, and ſurrounded every way with the cup. The beet is more uſed as a pot-herb than phyſically. It is one of the five emollient herbs.

BEETLE, *ſcarabæus*, in the hiſtory of inſects. See the article SCARABÆUS.

BEETLE alſo denotes a wooden inſtrument for driving piles, &c.

It is likewiſe called a ſtamper, and by paviors a rammer.

BEFORT, a town of Alſace, ſubject to France, and ſituated about fifteen miles north of Baſil, in eaſt longitude 7°, and north latitude 47° 35′.

BEG, or BEY, in the turkiſh affairs. See the article BEY.

BEGGAR, one who begs alms.

Beggars pretending to be blind, lame, &c. found begging in the ſtreets, are to be removed by conſtables; and if they refuſe to be ſo removed, ſhall be publicly whipt.

BEGHARDI, *beguardi*, a certain ſect of heretics, which aroſe in Germany, and in the Low-countries, about the end of the thirteenth century. They made profeſſion of monaſtical life, without obſerving celibacy; and maintained, if they are not ſcandalized by the monks, that man could become as perfect in this life, as he ſhall be in heaven; that every intellectual nature is of itſelf happy, without the ſuccour of grace; and that he who is in this ſtate of perfection ought to perform no good works, nor worſhip the hoſt.

BEGLERBEG, a governor of one of the principal governments in the turkiſh empire. There are two ſorts of beglerbegs; the one have a certain revenue aſſigned upon the cities, buroughs and villages of their government, which they raiſe by power of the commiſſion granted to them by the ſultan; the others have a certain rent paid by the treaſurer of the grand ſignior. They are become almoſt independent, and have under their juriſdiction, ſeveral ſangiacs or particular governments, and begs, agas, and other officers who obey them.

BEGONIA, in botany, a genus of the polygamia monoecia claſs of plants, without any calyx; the corolla of the male flower conſiſts of four patent regular petals, that of the hermaphrodite flower conſiſts of five oblong heart-ſhaped patent petals; the fruit is a trigonal capſule, divided into three cells, and containing a great number of ſmall ſeeds.

BEGUINS, congregations of devout young women, who maintain themſelves by the work of their hands, leading a middle kind of life between the ſecular and religious. Theſe ſocieties conſiſt of ſeveral houſes placed together in one incloſure, with one or more churches; according to the number of beguins.

There is in every houſe a prioreſs, without whoſe leave they cannot ſtir out. Their vow is conceived in theſe terms: *I promiſe to be obedient and chaſte, as long as I continue in this beguinage.* They obſerve a three years novitiate, before they take the habit, and the rector of the pa-

riſh

riſh is their ſuperior, but can do nothing without the advice of eight beguins.

They are eſtabliſhed in ſeveral parts of Flanders.

BEHEADING, *decollatio*, a capital puniſhment, inflicted by cutting off the head with an ax, ſword, &c.

Among the Romans beheading was a military puniſhment performed at firſt with an ax, but afterwards with a ſword, as done at preſent in Holland and France. In England the ax is preferred, and in Scotland they uſe, for this purpoſe, a machine called a maiden. See MAIDEN.

BEHEN, in the materia medica, the name of two roots, the one white, the other red; both accounted cordials and reſtoratives, but the white one to poſſeſs theſe qualities in the higheſt degree. They are likewiſe ſaid to be good in nervous caſes; but to what plant they belong is not known.

BEJA, a city of Alentejo, in Portugal, weſt longitude 8° 40′, and north latitude 37° 55′.

BEICHLINGEN, a city of Thuringia, in the circle of upper Saxony in Germany: eaſt long. 11° 25′, and north lat. 51° 20′.

BEILA, a town of Piedmont in Italy, about thirty-two miles north of Turin: eaſt long. 7° 45′, and north lat. 45°.

BEILSTEIN, a town of the landgraviate of Heſſe in Germany; ſituated about thirty-two miles north of Mentz, in 8° eaſt longitude, and 50° 30′ north lat.

BEIRA, a province of Portugal, lying between Entre-minho-Duro, on the north, and Eſtremadura on the ſouth.

BEIZA, or BEIZATH, in hebrew antiquity, a word ſignifying an egg, was a certain meaſure in uſe among the Jews. The beiza was likewiſe a gold coin, weighing forty drachms, among the Perſians, who gave out that Philip of Macedon owed their king Darius a thouſand beizaths or golden eggs for tribute money; and that Alexander the Great refuſed to pay them, ſaying, that the bird which laid theſe eggs was flown into the other world.

BELCASTRO, a city of Calabria, in the kingdom of Naples: eaſt longitude 17° 15′, and north latitude 39° 15′.

BELCOE, a town of Ireland, ſituated on Lough-ninny, in the county of Farmanagh, and province of Ulſter: weſt longitude 8° 6′, and north latitude 54° 5′.

BELEM, a fortreſs on the north ſide of the river Tagus, about three miles weſt of Liſbon.

BELEMNITÆ, or BELEMNITES, in natural hiſtory, uſually called thunder-bolt, is of the number of thoſe foſſils, concerning which naturaliſts ſtill diſpute whether it be of marine and animal origin, or a native foſſile ſubſtance.

The belemnitæ, are all compoſed of ſeveral thin coats or cruſts, encircling one another, and all of a ſtriated texture; they have uſually a hollow in the middle, of a conical ſhape; ſometimes empty, and ſometimes filled up with ſpar, pyrites, or a marine ſhell of the ſtrait concamerated kind. They have uſually a chink running down the whole length of the body, and ſometimes two or three, but the additional ones uſually begin at the apex of the ſtone, and run up but a little way. Their figure is ſometimes conic, ſometimes cylindric: ſome are of all the intermediate figures between conic and cylindric, and ſome almoſt orbicular. They are of various ſizes, from a quarter of an inch to eight inches in length, and though always of the ſame ſtructure, are of various colours, and they have a peculiar ſmell when ſcraped.

Belemnitæ are found in all ſorts of ſtrata, ſometimes in clay, ſometimes among gravel, often immerſed in beds of ſtone, often in looſe flints, and are ſometimes found covered with a ſparry cruſt of a different texture from that of the body of the maſs. See plate XXVI. fig. 11.

BELEZERO, the capital of a province of the ſame name, in Ruſſia, ſituated on the ſouth eaſt ſhore of the white lake: eaſt longitude 36°, and north lat. 60° 50′.

BELFAST, a port-town of Ireland, in the county of Antrim, and province of Ulſter: weſt longitude 6° 15′, north latitude 54° 38′.

BELFRY, that part of a ſteeple where bells are hung, or the timber frame whereby they are ſupported.

BELGARDEN, a town of eaſtern Pomerania, in Germany, ſubject to Pruſſia: eaſt longitude 16° 5′, and north lat. 54°.

BELGOROD, the capital of a province of the ſame name, in Ruſſia, ſituated almoſt in the middle of that empire: eaſt longitude 37°, and north latitude 51° 20′.

BELGOROD is alſo a fortified town of Beſſarabia, in Turky; ſituated on the Black-ſea, at the mouth of the river Neiſter: eaſt longitude 31°, and north latitude 46° 30′.

BELGRADE, the capital of the province of Servia, in european Turky; ſituated on the ſouth ſide of the Danube, in eaſt longitude 21° 20′, and north lat. 45°.

It

It was yielded to the Turks in 1739.

BELL *oculus*, in natural history. See the article OCULUS.

BELIEF, in a general and natural ſenſe, ſignifies a perſuaſion or ſtrong aſſent of the mind to any propoſition; but, in a more reſtrained and technical ſenſe, it imports that kind of aſſent which is founded on the authority or teſtimony of ſome perſons atteſting the truth of any matter propoſed.

Belief is generally diſtinguiſhed into divine and human, not with regard to the propoſition believed, but with regard to the teſtimony on which we believe it. When God reveals any thing to us, this gives us the teſtimony of divine belief. See the article FAITH.

But what man only acquaints us with, produces only a human belief. See the article EVIDENCE.

BELL, a well known machine, ranked by muſicians among the muſical inſtruments of percuſſion.

The metal of which a bell is made, is a compoſition of tin and copper, or pewter and copper: the proportion of one to the other is almoſt twenty pounds of pewter, or twenty-three pounds of tin, to one hundred weight of copper.

Bell-metal is prohibited to be imported, as are hawk-bells, *&c.*

The conſtituent parts of a bell are the body or barrel, the clapper on the inſide, and the ear or cannon on which it hangs to a large beam of wood.

The ſound of a bell conſiſts in a vibratory motion of its parts, much like that of a muſical chord. The ſtroke of the clapper muſt neceſſarily change the figure of the bell, and of a round make it oval; but the metal having a great degree of elaſticity, that part will return back again which the ſtroke drove fartheſt off from the center, and that even ſome ſmall matter nearer the center than before; ſo that the two parts which before were extremes of the longeſt diameter, do then become thoſe of the ſhorteſt; and thus the external ſurface of the bell undergoes alternate changes of figure, and by that means gives that tremulous motion to the air, in which the ſound conſiſts.

M. Perrault aſſerts, that the ſound of the ſame bell is a compound of the ſound of the ſeveral parts of it; ſo that where the parts are homogeneous, and the dimenſions of the figure uniform, there is ſuch a perfect mixture of all theſe ſounds, as conſtitutes one uniform, ſmooth, even ſound, and the contrary circumſtances produce harſhneſs. To confirm this, he obſerves the different tune of the bell, according to the part of it that is ſtruck, and yet ſtrike it where you will there is a motion of all the parts. He therefore conſiders bells as compoſed of an infinite number of rings, which have different tones according to their different dimenſions, as chords of different lengths have; which, when ſtruck, the vibrations of the parts immediately ſtruck determine the tone; being ſupported by a ſufficient number of conſonant tones in other parts.

It has been found by experience, that bells are heard further, if placed on plains, than on hills, and ſtill farther in vallies than on plains; the reaſon of which may be eaſily comprehended, by conſidering, that the higher the ſonorous body is, the medium is the rarer, and conſequently receives the leſs impulſe, and the vehicle is the leſs proper to convey it to a diſtance.

The bell-founders diſtinguiſh two ſorts of proportions, *viz.* the ſimple, and the relative. The ſimple proportions are thoſe which ought to be between the ſeveral parts of a bell, and which experience has ſhewed to be neceſſary towards rendering it ſweetly ſonorous. The relative proportions are thoſe which eſtabliſh a requiſite relation between one bell and another, ſo that their combined ſounds may effect a certain determined harmony.

The uſe of bells is very antient, as well as extenſive. We find them among the Jews, Greeks, Romans, Chriſtians, and Heathens, variouſly applied, as on the necks of men, beaſts, birds, horſes, ſheep; but chiefly hung in buildings, either religious, as in churches, temples, and monaſteries; or civil, as in houſes, markets, baths; or military, as in camps and frontier towns.

In the antient monaſteries, we find ſix kinds of bells enumerated by Durandus, *viz.* *Squilla*, rung in the refectory; *cymbalum*, in the cloiſter; *ſcla*, in the choir; *nolula* or *duple*, in the clock; *campana*, in the ſteeple; and *ſignum*, in the tower.

Diving BELL. See DIVING-BELL.

BELL FOUNDERY. See the article FOUNDERY OF BELLS.

BELL-FLOWER, *campanula*, in botany. See the article CAMPANULA.

BELL-WEED, *jacea nigra*, in botany. See the article JACEA.

BELLADONA, in botany, a genus of the pentandria-monogynia claſs of plants, called

de by Linnæus atropa. See the article ATROPA.

The flower conſiſts of a ſingle infundibuliform petal, divided into five ſegments at the mouth; and its fruit is a bilocular globoſe berry, containing a number of kidney-ſhaped ſeeds. See plate XXVII. fig. 1.

BELLCLARE, a town of Ireland in the county of Sligo, and province of Connaught, about twenty-three miles ſouth-weſt of Sligo: weſt longitude 9° 5′, and north latitude 53° 55′.

BELLENTS, a city of Switzerland, in eaſt longitude 9°, and north latitude 46°.

BELLESM, a town of the Orleanois in France: eaſt long. 40′, north lat. 48° 30′.

BELLEY, a town of Burgundy, in France, ſituated on the frontiers of Savoy, about ſixteen miles north-weſt of Chamberry: eaſt longit. 5° 20′, north lat. 45° 40′.

BELLEVILLE, a town of the Lyonois, in France, about nineteen miles north of Lyons: eaſt longitude 4° 45′, north latitude 46° 8′.

BELLIS, DAISY, in botany, a genus of the *ſyngeneſia polygamia-ſuperflua* claſs of plants, the compound flower of which is radiated, and the particular hermaphrodite one of a funnel ſhape: it has no other pericarpium than the cup; in which is contained a ſingle oval compreſſed ſeed, placed vertically. See plate XXVII. fig. 2.

Culture produces a great number of variations in the colour and duplicature of the flower, all of which have been deſcribed by authors as different ſpecies; whence this plant has been divided into almoſt fifty.

BELLEISLE, an iſland on the coaſt of Britany, in France: weſt longitude 8°, and north latitude 47° 20′.

BELLISLE is alſo an iſland of America, on the coaſt of New Britain.

It gives name to the ſtreights which ſeparate Newfoundland from New Britain: weſt longitude 58° north latitude 52°.

BELLON, a diſtemper common in countries where they ſmelt lead ores.

It is attended with languor, intolerable pains and ſenſation of gripings in the belly, and generally coſtiveneſs.

Beaſts, poultry, &c. as well as men, are ſubject to this diſorder: hence a certain ſpace round the ſmelting-houſes is called bellon-ground, becauſe it is dangerous for an animal to feed upon it.

The method of cure, which has been found moſt ſucceſsful in this diſtemper, is giving cryſtals of tartar in ſmall doſes, and repeating the doſe two or three times a day.

BELLONARII, in roman antiquity, the prieſts of Bellona, who, in honour of that goddeſs, uſed to make inciſions in their body; and after having gathered the blood in the palm of their hand, give it to thoſe who were partakers of their myſteries.

BELLONIA, in botany, a genus of the *pentandria-monogynia* claſs of plants, whoſe flower, conſiſting of a ſingle petal, is of the rotated kind; the fruit is a capſule of a turbinato-oval figure, ſurrounded by the cup, and containing only one cell, in which are numerous very ſmall roundiſh ſeeds.

BELLOWING, among ſportſmen, denotes the noiſe of roes in rutting time.

BELLOWS, a machine ſo contrived as to agitate the air with great briſkneſs, exſpiring and inſpiring it by turns, and that only from enlarging and contracting its capacity.

This machine is uſed in chambers and kitchens, in forges, furnaces and founderies, to blow up the fire: it ſerves alſo for organs and other pneumatic inſtruments, to give them a proper degree of air: all theſe are of various conſtructions, according to their different purpoſes, but in general they are compoſed of two flat boards, ſometimes of an oval, ſometimes of a triangular figure: two or more hoops, bent according to the figure of the boards, are placed between them; a piece of leather, broad in the middle, and narrow at both ends, is nailed on the edges of the boards, which it thus unites together: as alſo on the hoops which ſeparate the boards, that the leather may the eaſier open and fold again; a tube of iron, braſs, or copper is faſtened to the undermoſt board, and there is a valve within that covers the holes in the underboard, to keep in the air.

Each pair of bellows imported is valued in the book of rates at three ſhillings and four-pence, and pays duty $7\frac{70}{100}$d. whereof $6\frac{75}{100}$d. is drawn back on exportation.

BELLUNO, the capital of the Belluneſe, in the dominions of Venice, about forty miles north of Padua: eaſt longitude 12° 40′, and north latitude 46° 20′.

BELLY, in anatomy, the ſame with what is more uſually called abdomen, or rather the cavity of the abdomen. See the article ABDOMEN.

BELO-

BELOMANCY, a ſort of divination by means of arrows, practiſed in the eaſt, and particularly in Arabia.

Belomancy has been performed different ways, whereof one was this: ſuppoſe a parcel of arrows, eleven or more of them being put into a bag; theſe were afterwards drawn out, and according as they were marked or not, they judged of future events.

BELT, *balteus*, in the military art, a leathern girdle for ſuſtaining the arms, *&c.* of a ſoldier.

BELTS, in aſtronomy, two zones, or girdles, ſurrounding the body of the planet of Jupiter, more lucid than the reſt, and of unequal breadth.

BELTS, in geography, certain ſtreights between the German ocean, and the Baltic. The belts belong to the king of Denmark, who exacts a toll from all ſhips which paſs through them, excepting thoſe of Sweden, which are exempted.

BELTURBET, a town of Ireland, in the county of Cavan and province of Ulſter, ſituated upon the river Earn, about eight miles north of Cavan, in 7° 35′ weſt longitude, and 54° 7′ north latitude.

BELTZ, the capital of a palatinate of the ſame name, in the province of Red Ruſſia, in Poland: eaſt longitude 24°, and north latitude 50° 5′.

BELVIDERE, in the italian architecture, *&c.* denotes either a pavilion on the top of a building, or an artificial eminence in a garden; the word literally ſignifying a fine proſpect.

BELVIDERE, in geography, the capital of a province of the ſame name, on the weſtern coaſt of the Morea, in 22° eaſt longitude, and 37° north latitude.

BEMA, in eccleſiaſtical antiquity, denoted the moſt ſacred part of a church, or that where the altar ſtood.

BEMA was alſo uſed for the biſhop's throne, as well as for the ambo. See AMBO.

BEMSTER, a market-town of Dorſetſhire, about twelve miles north-weſt of Dorcheſter, ſituated in 2° 50′ weſt longitude, and 50° 45′ north latitude.

BENCH, or BANC, in law. See BANC.

Free-BENCH ſignifies that eſtate in copyhold lands, which the wife, being eſpouſed a virgin, has after the deceaſe of her huſband, for her dower, according to the cuſtom of the manor. As to this free-bench, ſeveral manors have ſeveral cuſtoms; and in the manors of Eaſt and Weſt Enbourne, in the county of Berks, and other parts of England, there is a cuſtom, that when a copyhold tenant dies, the widow ſhall have her free-bench in all the deceaſed huſband's lands, whilſt ſhe lives ſingle and chaſte; but if ſhe commits incontinency, ſhe ſhall forfeit her eſtate: nevertheleſs, upon her coming into the court of the manor, riding on a black ram, and having his tail in her hand, and at the ſame time repeating a form of words preſcribed, the ſteward is obliged, by the cuſtom of the manor, to re-admit her to her free-bench.

King's-BENCH. See KING's-BENCH.

BENCHERS, in our inns of court, the ſenior members of the ſociety, who are inveſted with the government thereof.

BENCOOLEN, a town and fort on the ſouth-weſt coaſt of Sumatra, belonging to the Eaſt-India company, from whence great quantities of pepper are imported. It is ſituated in 101° eaſt longitude, and 4° ſouth latitude.

BEND, in heraldry, one of the nine honourable ordinaries, containing a third part of the field when charged, and a fifth when plain. It is ſometimes, like other ordinaries, indented, ingrailed, *&c.* and is either dexter or ſiniſter.

BEND *dexter* is formed by two lines drawn from the upper part of the ſhield on the right, to the lower part of the left, diagonally. It is ſuppoſed to repreſent a ſhoulder belt, or a ſcarf, when worn over the ſhoulder. See plate XXVII. fig. 3.

BEND *ſiniſter* is that which comes from the left ſide of the ſhield to the right: this the french heralds call a barre. See plate XXVII. fig. 3.

In BEND is when any things, borne in arms, are placed obliquely from the upper corner to the oppoſite lower, as the bend lies.

Parti per BEND, *Point in* BEND, *&c.* See the articles PARTI and POINT.

BENDER, a town of Beſſarabia, in european Turky, ſituated on the river Neiſter, in 29° eaſt longitude, and 46° 40′ north latitude.

BENDING, in a general ſenſe, the reducing a ſtreight body into a curve, or giving it a crooked form.

The bending of timber, boards, *&c.* is effected by means of heat, whereby their fibres are ſo relaxed that you may bend them into any figure.

BENDING, in the ſea-language, the tying two ropes or cables together: thus they ſay, bend the cable, that is, make it faſt to the ring of the anchor; bend the ſail, make it faſt to the yard.

BENDITTO, a town of the Mantuan, in Italy, ſituated near the ſouth ſhore of the river Po, about twelve miles ſouth-eaſt of

Mantua, in 11° 30′ east longitude, and 45° north latitude.

BENDS, in a ship, the same with what is called wails, or wales; the outmost timbers of a ship's side, on which men set their feet in climbing up. They are reckoned from the water, and are called the first, second, or third bend. They are the chief strength of a ship's sides, and have the beams, knees, and foot-hooks bolted to them.

BENDY, in heraldry, is the field divided into four, six, or more parts, diagonally, and varying in metal and colour.

The general custom of England is to make an even number, but in other countries they regard it not, whether even or odd. See plate XXVII. fig. 4.

Counter BENDY is used by the French, to express what we ordinarily call bendy of six per bend sinister, counterchanged.

Barry BENDY, *Paly* BENDY } See the articles { BARRY, PALY.

BENEAPED, among sailors. A ship is said to be beneaped when the water does not flow high enough to bring her off the ground, out of the dock, or over the bar.

BENEDICTINES, in church-history, an order of monks, who profess to follow the rules of St. Benedict.

The benedictines, being those only that are properly called monks, wear a loose black gown, with large wide sleeves, and a capuche, or cowl, on their heads, ending in a point behind. In the canon law, they are styled black friers, from the colour of their habit.

The rules of St. Benedict, as observed by the english monks before the dissolution of the monasteries, were as follows: they were obliged to perform their devotions seven times in twenty-four hours, the whole circle of which devotions had a respect to the passion and death of Christ: they were obliged always to go two and two together: every day in lent they were obliged to fast till six in the evening, and abated of their usual time of sleeping and eating; but they were not allowed to practise any voluntary austerity without leave of their superior: they never conversed in their refectory at meals, but were obliged to attend to the reading of the scriptures: they all slept in the same dormitory, but not two in a bed; they lay in their cloaths: for small faults they were shut out from meals; for greater, they were debarred religious commerce, and excluded from the chapel; and as to incorrigible offenders, they were excluded from the monasteries. Every monk had two coats, two cowls, a table-book, a knife, a needle, and a handkerchief; and the furniture of their bed was a mat, a blanket, a rug, and a pillow.

BENEDICTION, or BLESSING, The Hebrews, under this name, understand the present usually sent from one friend to another, as also the blessing conferred by the patriarchs, on their death-beds, upon their children.

The privilege of benediction was one of those early instances of honour and respect paid to bishops in the primitive church. The custom of bowing the head to them, and receiving their blessings was become universal. In the western churches there was antiently a kind of benediction which followed the Lord's prayer; and after the communion, the people were dismissed with a benediction.

BENEFICE, *beneficium*, in an ecclesiastical sense, a church endowed with a revenue, for the performance of divine service; or the revenue itself assigned to an ecclesiastical person, by way of stipend, for the service he is to do that church.

All church-preferments, except bishoprics, are called benefices; and all benefices are, by the canonists, sometimes stiled dignities: but we now ordinarily distinguish between benefice and dignity, applying dignity to bishoprics, deanries, archdeaconries, and prebendaries; and benefice to parsonages, vicarages, and donatives.

Benefices are divided by the canonists into simple and sacerdotal; in the first there is no obligation but to read prayers, sing, &c. such are canonries, chaplainships, chantries, &c. the second are charged with the cure of souls, or the direction and guidance of consciences: such are vicarages, rectories, &c.

The romanists again distinguish benefices into regular and secular.

Regular or titular benefices are those held by a religious, or a regular, who has made profession of some religious order: such are abbies, priories, conventuals, &c. or rather, a regular benefice is that which cannot be conferred on any but a religious, either by its foundation, by the institution of some superior, or by prescription; for prescription, forty years possession by a religious makes the benefice regular.

Secular benefices are only such as are to be given to secular priests, *i. e.* to such as live in the world, and are not engaged in any monastic order. All benefices are reputed secular, till the contrary is made

to

to appear. They are called secular benefices, because held by seculars; of which kind are almost all cures.

Some benefices, regular in themselves, have been secularized by the pope's bull.

The canonists distinguish three manners of vacating a benefice, *viz. de jure, de facto*, and by the sentence of a judge.

A benefice is vacated *de jure*, when the person enjoying it is guilty of certain crimes expressed in those laws, as heresy, simony, &c.

A benefice is vacated *de facto*, as well as *de jure*, by the natural death, or the resignation of the incumbent; which resignation may be either express, or tacit, as when he engages in a state, &c. inconsistent with it, as, among the romanists, by marrying, entering into a religious order, or the like.

A benefice becomes vacant by the sentence of a judge, by way of punishment for certain crimes, as concubinage, perjury, &c.

It is observed, that antiently there were five cases by which benefices were acquired; by the nominative, as in royal nomination; by the genitive, as when the children of great men, &c. are provided of benefices by their birth; by the dative, as when speaking of a benefice, it is said *date*, and *dabitur vobis*; by the accusative, as where, by virtue of an accusation, either true or false, an incumbent is dispossessed, and another admitted; by the ablative, as when benefices are taken away by force from the poor and helpless: but the vocative, which is the most just and legitimate, is out of use.

A BENEFICE *in commendam* is that, the direction and management of which, upon a vacancy, is given, or recommended, to an ecclesiastic, for a certain time, till he may be conveniently provided for. See the articles REGULAR and SECULAR.

Suspensio a BENEFICIO. See SUSPENSION.

Primo BENEFICIO *ecclesiastico habendo*. See the article PRIMO.

BENEFIT *of clergy*. See the article *Benefit of* CLERGY.

BENEVENTE, a town of Leon, in Spain, situated on the river Esla, about forty miles south of the city of Leon, in 6° west longitude, and 42° 20′ north latitude.

BENEVENTO, the capital of the farther Principate, in the kingdom of Naples, about thirty-four miles north-east of the city of Naples; situated in 15° 30′ east longitude, and 41° 15′ north latitude.

BENEVOLENCE is used in the statutes of this realm for a voluntary gratuity given by the subjects to the king,

BENFIELD, a town of Alsace, in Germany, about fifteen miles south of Strasburg, situated in 7° 30′ east longitude, and 48° 25′ north latitude.

BENGAL, the most easterly province of the mogul's empire, lying at the bottom of a large bay, which takes its name from this province.

It is one of the most fertile provinces in India, being yearly overflowed by the Ganges, as Egypt is by the Nile.

BENGUELA, a kingdom upon the western coast of Africa, between Angola and Jaga: it is also the name of the capital of that kingdom.

BENJAMIN, the same with benzoin. See the article BENZOIN.

BENIN, the capital of a country of the same name, on the coast of Guinea, situated in 5° east longitude, and 7° 30′ north latitude.

BENSHEIM, a town of Germany, situated on the east side of the river Rhine, about ten miles east of Worms, in 8° 30′ east longitude, and 49° 40′ north latitude.

BENTHEIM, the capital of a county of the same name, in the circle of Westphalia; situated in 7° 15′ east long. and 52° 25′ north latitude.

BENTIVOGLIO, a town in the territory of Bologna, in Italy, about ten miles north of that city, situated in 12° east long. and 44° 30′ north latitude.

BENZOIN, a dry and solid resin, brought to us in masses of various sizes, from the East Indies, particularly from the kingdom of Siam, and the islands of Java and Sumatra. It is to be chosen fresh, and of a quick pungent smell, easily broken, and full of the white almond-like granules. The black benzoin is vastly inferior to this, and ought wholly to be rejected. It is a powerful expectorant, and is given with success in infarctions of the lungs, and inveterate coughs. It is sometimes used externally in plasters applied to the head for head-achs, and to the stomach, to promote digestion.

The preparations of benzoin are, 1. A tincture, made in spirit of wine, and commended in taking freckles from the skin. 2. Flowers of benzoin, which are sudorific, and good in asthmas and tubercles of the lungs. And, 3. Oil and spirit of benzoin, the latter of which is diuretic, but not very pleasant, by reason of its empyreuma; and the former is accounted a good vulnerary, both in external and internal application.

BERBERIS, the BARBERRY BUSH, a genus

nus of plants of the *hexandria-monogynia* claſs, the flower of which conſiſts of ſix roundiſh, hollow, erecto-patent petals, and is ſcarce larger than the cup: the fruit is a cylindric, obtuſe, umbilicated berry, with one cell, containing two oblong, cylindric, and obtuſe ſeeds.

The fruit is very cooling and aſtringent, and good to quench thirſt.

The conſerve of its fruit is of uſe in fluxes and the jaundice.

BERCHEROIT, or BERKCOITS, a weight uſed at Archangel, and in all the ruſſian dominions, to weigh ſuch merchandizes as are very heavy and bulky: It weighs about three hundred and ſixty-four pounds engliſh avoirdupois weight.

BERENGARIANS, a religious ſect of the XIth century, which adhered to the opinion of Berengarius, who, even in thoſe days, ſtrenuouſly aſſerted, that the bread and wine in the Lord's ſupper is not really and eſſentially, but only figuratively, changed into the body and blood of Chriſt.

His followers were divided in opinion as to the euchariſt: they all agreed, that the elements are not eſſentially changed; though ſome allowed them to be changed in effect: others admitted a change in part; and others an entire change, with this reſtriction, that to thoſe who communicated unworthily, the elements were changed back again.

BERE-REGIS, a market town in Dorſetſhire, about ten miles north-eaſt of Dorcheſter, in 2° 20′ weſt longitude, and 50° 40′ north latitude.

BERG, a duchy of Weſtphalia, in Germany, lying on the eaſtern ſhore of the river Rhine, which ſeparates it from Cologne.

BERGAMO, a town in the territories of Venice, in Italy, about twenty-five miles north-eaſt of Milan, in 10° eaſt longit. and 45° 40′ north latitude.

BERGAMOT, the name of a fragrant eſſence extracted from a fruit which is produced by ingrafting a branch of a lemon-tree upon the ſtock of a bergamot-pear.

It is alſo the denomination of a coarſe tapeſtry, manufactured with flocks of ſilk, wool, cotton, hemp, ox, cow, or goat's hair, and ſuppoſed to be invented by the people of Bergamo.

BERGEN, the capital of a province of the ſame name, in Norway: it is a conſiderable port-town on the German ocean, in 6° eaſt lon. and 60° north lat.

BERGEN is alſo the name of the capital of the iſle of Rugen, on the coaſt of Pomerania, in 14° eaſt longit. and 54° 15′ north latitude.

BERGEN-OP-ZOOM, a fortified town of dutch Brabant, about twenty miles north of Antwerp, in 4° 5′ eaſt longitude, and 51° 30′ north latitude.

BERGERACK, a city of Guienne, in France, ſituated on the river Dordonne, about forty miles eaſt of Bourdeaux, in 20′ eaſt lon. and 44° 55′ north lat.

BERG-*gruen*, in natural hiſtory, the name of an earth uſed in painting, and properly called green ockre, though not known among the colourmen under that name. It is found in many parts of Germany, Italy, and England, commonly in the neighbourhood of copper-mines, from particles of which metal it receives its colour. In many parts of Germany, they have a purer kind of this, diſtinguiſhed by no peculiar name, but ſeparated by art from the waters draining from the copper-mines, and differing no otherwiſe from this native ſubſtance, than as the waſhed ockres of Oxfordſhire, &c. do from theſe ſent us in their natural condition. The characters by which the native kind is known from other green earths, are theſe: it is a denſe, compact ſubſtance, conſiderably heavy, and of a pale, but not diſagreeable green; of a rough and uneven, but not duſty ſurface, and ſomewhat unctuous to the touch. It adheres firmly to the tongue; does not break eaſily betweeen the fingers; nor at all ſtain the hands. It is of a brackiſh diſagreeable taſte, and does not ferment with acids.

BERGHMOT, an aſſembly, or court, held upon a hill, in Derbyſhire, for deciding controverſies among the miners.

BERGZABERN, a town of lower Alſace, about five miles ſouth of Landau, in 8° eaſt lon. and 49° 5′ north lat.

It is ſubject to France.

BERIBERI, a kind of palſy, common in the Eaſt Indies. The word, in the language of the country, ſignifies a ſheep, and was given by the natives to this diſtemper, becauſe the patients, on throwing out their knees, and lifting up their legs, ſeem to imitate ſheep in their walk.

BERKSHIRE, a county of England, lying on the ſouth ſide of the river Thames, oppoſite to Oxfordſhire and Buckinghamſhire.

It gives the title of earl to a branch of the Howard family.

BERLIN, the capital of the king of Pruſ-

ſia's dominions in Germany, ſituated on the river Spree, in the marquiſate of Brandenburg: eaſt longitude 14°, and north latitude 52° 30′.

BERLIN is alſo the name of a kind of chariot, ſo called from the city of Berlin.

BERME, in fortification, a ſpace of ground left at the foot of the rampart, on the ſide next the country, deſigned to receive the ruins of the rampart, and prevent their filling up the foſſe. It is ſometimes paliſadded, for the more ſecurity; and in Holland it is generally planted with a quick-ſet hedge. It is alſo called liziere, relais, foreland, retraite, pas de ſouris, &c.

BERMUDA-ISLANDS, a cluſter of very ſmall iſlands, in the Atlantic ocean, lying almoſt in the ſhape of a ſhepherd's hook, in 65° weſt longitude, and 32° 30′ north latitude.

BERN, a town of Bohemia, about fifteen miles weſt of Prague, in 14° eaſt longit. and 50° north latitude.

BERN is alſo the name of a city and canton in Switzerland; the former being ſituated in 7° 20′ eaſt lon. and 47° north lat.

The canton of Bern is by far the moſt extenſive and powerful of all Switzerland: their government is ariſtocratical, and their religion proteſtant, according to the preſbyterian form.

BERNACLE, or CLAKIS, in ornithology, the anas with the head and neck black. See the article ANAS.

This is a very ſingular bird: it is conſiderably ſmaller than the common gooſe, but larger than the duck; the head is large and rounded; the eyes are large; the beak is black, and much ſmaller than in the common gooſe, though broader in proportion to its length; the under part of the body is white, with ſomewhat of an admixture of grey; the back is variegated with black and grey; and the covering feathers of the tail are part white, and part black; the tail is black, and the covering feathers of the wings are very elegantly variegated with black, grey, and white.

This is the bird which Gerard, and ſome other authors, have declared to be produced from a peculiar ſpecies of ſhell-fiſh, called the bernacle-ſhell, found on decayed wood that lies about the ſea-ſhores. The love of wonderful obſervations raiſed this firſt account of the bird's being produced from a ſhell fiſh, that uſually adhered to old wood, into the ſtory of that ſhell's growing upon a tree in manner of its fruit. The whole matter that gave origin to this ſtory is, that the ſhell-fiſh, ſuppoſed to have this wonderful production, uſually adhere to old wood, and that they have a kind of fibrils hanging out of them, which, in ſome degree, reſemble feathers of ſome bird; from which aroſe a ſtory, that they contained real birds.

BERNACLE, in the hiſtory of ſhells. See the article CONCHA ANATIFERA.

BERNARDINES, an order of monks, founded by Robert, abbot of Moleme, and reformed by St. Bernard. They wear a white robe with a black ſcapulary, and when they officiate they are cloathed with a large gown, which is all white, and hath great ſleeves, with a hood of the ſame colour. They differ but very little from the ciſtercians. See the article CISTERCIANS.

BERNAW, the name of three towns in Germany, one in the electorate of Brandenburg, another in the biſhopric of Ratiſbon, and the third in the upper Palatinate.

BERNBURG, a town of Anhalt, in the circle of upper Saxony, ſituated in 12° 20′ eaſt longitude, and 51° 50′ north latitude.

BERRY, *bacca*, a round fruit, for the moſt part ſoft, and covered with a thin ſkin, containing ſeeds in a pulpy ſubſtance; but if it be harder, or covered with a thicker ſkin, it is called *pomum*, apple.

Berries grow ſcattering upon trees and ſhrubs, and in that are diſtinguiſhed from *acini*, which are berries hanging in cluſters. See the article ACINUS.

They are of various ſizes, forms, properties, and uſes, according to the plants on which they grow. Some are uſed in dying, as french berries.

The moſt remarkable in the materia medica are baccæ alkekengi, or winter-cherry berries, agnus caſtus berries, bay berries, juniper berries, and myrtle berries.

Berries for the dyers uſe, imported from the britiſh plantations, pay for every 20 s. value, upon oath, 2 s. $20\frac{65}{100}$ d. whereof 2 s. $4\frac{95}{100}$ d. is drawn back on exporting them. French berries, for the ſame purpoſes, pay 11 s. $7\frac{65}{100}$ d. for every 20 s. value; whereof, upon exporting them, 6 s. $1\frac{95}{100}$ d. is drawn back.

BERRY, in geography, a territory of the Orle-

Orleanois, having Touraine on the weſt, and the Nivernois on the eaſt.

BERRY-POINT, a cape at the entrance of Torbay, in Devonſhire.

BERSELLO, or BRUSELLO, a town of the Modeneſe, in Italy, ſituated on the river Po, about fourteen miles north eaſt of Parma, eaſt longitude 11°, and north latitude 44° 40'.

BERTRAND, or St. BERTRAND, a city of Gaſcony, in France, ſituated on the river Garonne, about forty-five miles ſouth of Toulouſe, in 30° eaſt longitude, and 43° 25' north latitude.

BERVY, a ſea-port town and borough of Scotland, ſituated on the German ocean, about twenty-two miles ſouth-weſt of Aberdeen, in 2° 5' weſt longit. and 56° 40' north latitude.

BERWICK, a borough town on the borders of England and Scotland, ſituated on the north ſide of the river Tweed, in 2° 40' weſt lon. and 55° 40' north lat. It ſends two members to parliament.

North-BERWICK, a town of Scotland, ſituated at the entrance of the frith of Forth, about ſeventeen miles eaſt of Edinburgh, in 2° 27' weſt longitude, and 56° 3' north latitude.

BERYL, βηρυλλος, in natural hiſtory, called by our lapidaries *aqua marina*, is a pellucid gem of a bluiſh green colour, found in the Eaſt Indies, and about the gold mines of Peru: we have alſo ſome from Sileſia, but what are brought from thence are oftener coloured cryſtals, than real beryls; and when they are genuine, they are greatly inferior both in hardneſs and luſtre to the oriental and peruvian kinds.

The beryl, like moſt other gems, is met with both in the pebble and columnar form, but in the latter moſt frequently. In the pebble form it uſually appears of a roundiſh but flatted figure, and commonly full of ſmall flat faces, irregularly diſpoſed. In the columnar or cryſtalline form it always conſiſts of hexangular columns, terminated by hexangular pyramids. It never receives any admixture of colour into it, nor loſes the blue and green, but has its genuine tinge in the degrees from a very deep and duſky to the paleſt imaginable of the hue of ſea-water.

The beryl, in its perfect ſtate, approaches to the hardneſs of the garnet, but it is often ſofter; and its ſize is from that of a ſmall tare to that of a pea, a horſe bean, or even a wallnut. As to its virtues, ſome fanciful people have adviſed it to be worn to prevent ſea-ſickneſs. It is ſaid to be an aſtringent; and, indeed, its colour is owing to a mixture of cupreous and ferruginous particles; but they are in too ſmall quantity to have any effect as medicines.

BERYL, CRYSTAL, in natural hiſtory, a ſpecies of what Dr. Hill calls *ellipomacryſtyla*, or imperfect cryſtals, is of an extreme pure, clear, and equal texture, and ſcarce ever ſubject to the ſlighteſt films or blemiſhes. It is ever conſtant to the peculiarity of its figure, which is that of a long and ſlender column, remarkably tapering towards the top, and very irregularly hexangular. It is of a very fine tranſparence, and naturally of a pale brown, and carries ſo evident marks of diſtinction from all other brown cryſtals, that our lapidaries call it, by way of eminence, the beryl-cryſtal, or ſimply the beryl.

BES, or BESSIS, in roman antiquity, two thirds of the as. See the article AS.

BES alſo denotes two thirds of the jugerum. See the article JUGERUM.

BESAILE, in law, a writ that lies where the great-grand-father was ſeiſed in fee of any lands, &c. at the time of his death, and after his deceaſe, a ſtranger enters thereon, the ſame day, and keeps out the heir.

BESANCON, the capital of Franche Comte, in France, ſituated in 6° eaſt longitude, and 47° 20' north latitude.

BESANT, or BEZANT, a coin of pure gold, of an uncertain value, ſtruck at Byzantium, in the time of the chriſtian emperors; from hence the gold offered by the king at the altar, is called beſant, or beſant.

BESANTS, in heraldry, round pieces of gold, without any ſtamp, frequently borne in coats of arms. See plate XXVII. fig. 8.

BESIERS, a city of lower Languedoc, in France, about two miles north of the Mediterranean, and fifteen north-eaſt of Narbonne, in 3° eaſt long. and 43° 25' north latitude.

BESLERIA, in botany, a genus of the *didynamia-angioſpermia* claſs of plants. Its flower conſiſts of a ſingle ringent petal. Its fruit is a berry of a globoſe form, containing only one cell, in which are ſeveral ſeeds, very ſmall, and of a roundiſh figure.

BESORCH, a coin of tin, or ſome alloyed metal, current at Ormus, at the rate of 7 $\frac{7}{8}$ parts of a farthing ſterling.

BESSA-

Fig. 1. BELLADONA.

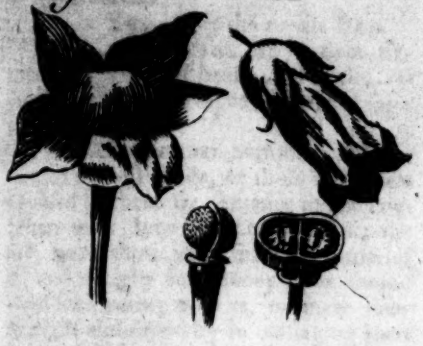


Fig. 2. BELLIS, the *DAISY*.



Fig. 3. BEND.

Dexter. Sinister.

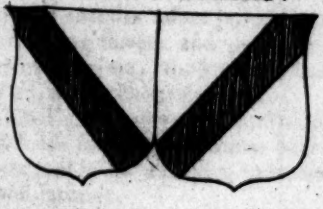


Fig. 4. BENDY.



Fig. 5. BETONY.



Fig. 6. BETULA, the *BIRCH-TREE*.



Fig. 7. BEVILE.

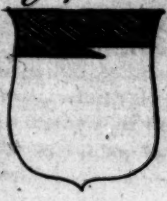
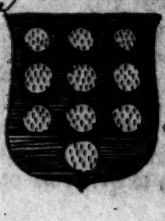
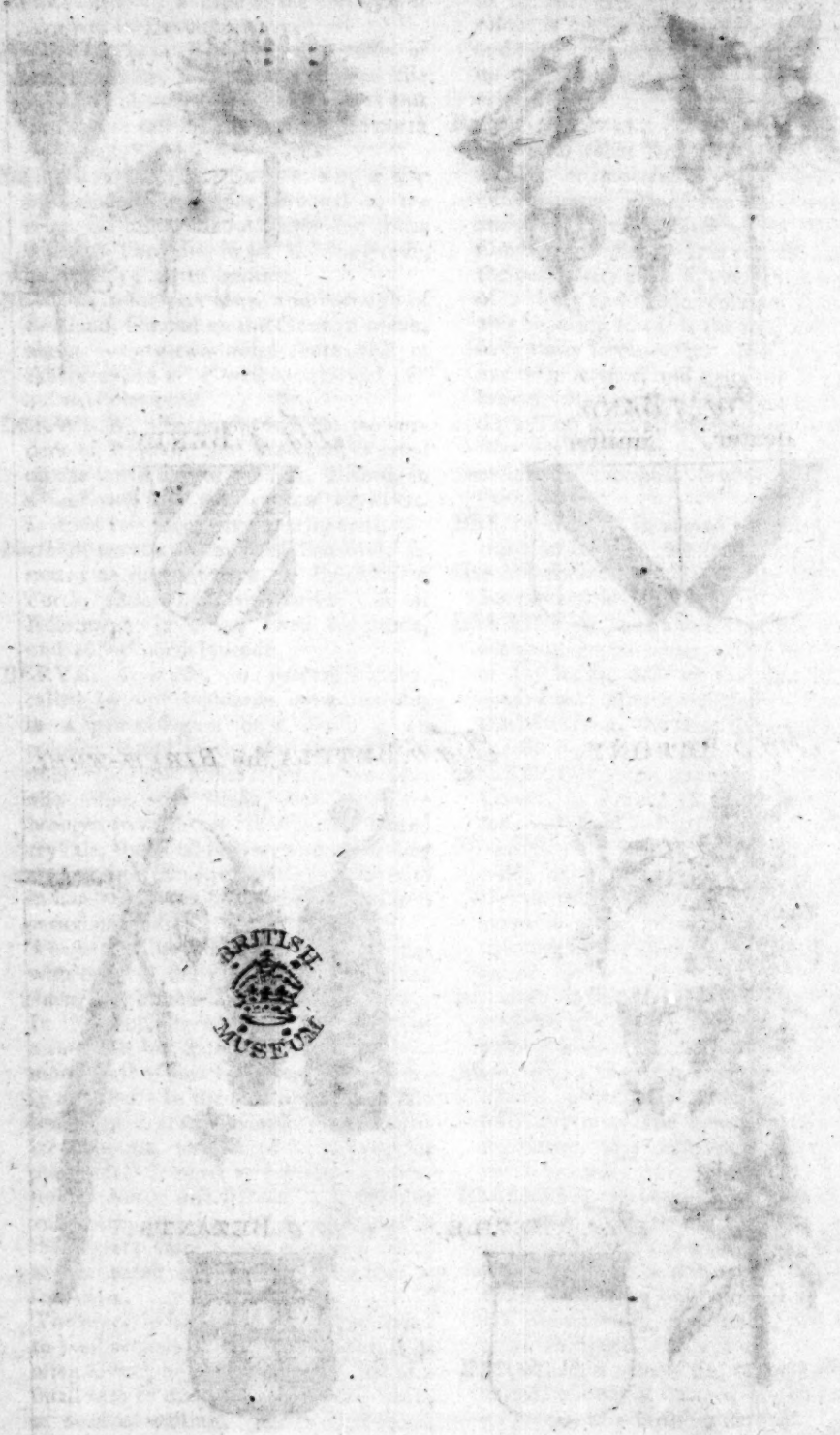


Fig. 8. BEZANTS.



T. Jeffreys sculp.


BRITISH MUSEUM

BESSARABIA, a province of Turky in Europe, lying about the ſeveral mouths of the Danube.

BESSIS, or BES. See the article BES.

BESTAIL, or BESTIAL, in antient ſtatutes, all kinds of beaſts, or cattle, eſpecially thoſe purveyed for the king's proviſion.

BESTIARII, in roman antiquity, ſuch as fought againſt beaſts, or thoſe who were expoſed to them by ſentence of the law. There were four kinds of beſtiarii; the firſt were thoſe who made a trade of it, and fought for money; the ſecond were ſuch young men as, to ſhew their ſtrength and dexterity in managing their arms, fought againſt beaſts; the third kind was, where ſeveral beſtarii were let looſe at once, well armed againſt a number of beaſts; and the fourth kind were thoſe condemned to the beaſts, conſiſting either of enemies taken priſoners in war, or as being ſlaves, and guilty of ſome enormous crime; thoſe were all expoſed naked, and without defence.

BESTRICIA, a city of Tranſilvania, remarkable for the gold mines near it: it is ſituated in 22° eaſt longitude, and 48° north latitude.

BETA, BEET, in botany. See BEET.

BETANCOS, a city of Gallicia, in Spain, in 8° 50′ weſt longitude, and 43° 15′ north latitude.

BETEL, or BETLE, in botany, a kind of long pepper, found in Malabar, and other parts of the Eaſt Indies.

Its leaves are eſteemed cordial, and give a fine flavour to the breath; in which intention, they are much in uſe among the natives of thoſe parts.

BETHLEHEM, once a flouriſhing city of Paleſtine, but now only a poor village, is ſtill much frequented, as being the place of our Saviour's birth: it is ſituated in 36° eaſt longitude, and 31° 30′ north latitude.

BETHLEHEM is alſo the name of a town of Brabant, in the Auſtrian Netherlands, about two miles north of Louvain, ſituated in 4° 35′ eaſt longitude, and 51° north latitude.

BETHLEHEM, or BEDLAM *Hoſpital*. See the article HOSPITAL.

BETHLEHEMITES, in church-hiſtory, a religious order, called alſo ſtar-bearers, *ſtelliferi*, becauſe they were diſtinguiſhed by a red ſtar with five rays, which they wore on their breaſt, in memory of the ſtar that appeared to the wiſe men, and conducted them to Bethlehem.

There is an order of bethlehemites ſtill ſubſiſting in the ſpaniſh Weſt Indies, who are habited like capuchins, with this difference, that they wear a leather girdle inſtead of a cord, and on the right ſide of their cloak an eſcutcheon, repreſenting the nativity of our Saviour.

BETHUNE, a little fortified town of Artois, in the french Netherlands, about thirteen miles north of Arras, ſituated in 2° 35′ eaſt longitude, and 50° 32′ north latitude.

BETLIS, a city in the north of Curdiſtan, ſituated on a ſteep rock, at the ſouth end of the lake Van, on the frontiers of Perſia and Turky, in 45° eaſt longitude, and 37° 30′ north latitude.

BETONY, *betonica*, in botany, a genus of the *didynamia gymnoſpermia* claſs of plants, whoſe flower, conſiſting of a ſingle labiated petal, is of a bright red colour, and diſpoſed in ſhort ſpikes; the cup contains four ovated ſeeds. See plate XXVII. fig. 5.

This plant is common in our woods: Bauhine calls it *betonica purpurea*. It is a famous cephalic.

BETUE, or BETAW, a territory in dutch Guelderland, between the river Maeſe and Lech, ſuppoſed to be the antient Batavia.

BETULA, the BIRCH-TREE, in botany, a genus of plants, of the *monoecia-tetrandria* claſs: the male flower is amentaceous, formed of a number of monopetalous floſcules, each of which is divided into four parts. In the female flower the calyx is lightly divided into three ſegments: the fruit is a cylindric cone, and the ſeeds are on each ſide edged with a membrane. See plate XXVII. fig. 6.

The birch tree is of uſe for the huſbandman's ox-yokes, for hoops, ſmall ſcrews, paniers, brooms, wands, bavin-bands, withies for faggots, arrows, bolts, ſhafts, diſhes, bowls, ladles: it is alſo good for fuel, great and ſmall coal, the laſt being made by charing the ſlender bruſh and tops of the twigs and loppings. In Ruſſia and Poland, they cover houſes with the bark of the birch-tree, inſtead of ſlate and tile.

BEVECUM, a town of Brabant in the auſtrian Netherlands, about ſeven miles ſouth of Louvain, ſituated in 4° 45′ eaſt longitude, and 50° 45′ north latitude.

BEVEL, among maſons, carpenters, joiners, and bricklayers, a kind of ſquare, one leg whereof is frequently crooked, according to the ſweep of an arch or vault.

It is moveable on a center, and ſo may be ſet to any angle.

The make and uſe of this inſtrument is pretty much the ſame as thoſe of the common ſquare and mitre, except that thoſe are fixed, the firſt at an angle of ninety degrees, and the ſecond at forty-five; whereas the bevel being moveable, it may in ſome meaſure ſupply the place of both, which it is chiefly intended for, ſerving to ſet off or tranſfer angles, either greater or leſs than ninety or forty-five degrees.

BEVEL-ANGLE, any other angle beſides thoſe of ninety or forty-five degrees. See the article ANGLE.

BEVELAND, the name of two iſlands, in the province of Zealand, in the united Netherlands.

They are called North and South Beveland; and lye between the eaſtern and weſtern branches of the Scheld.

BEVERLY, a borough-town of Yorkſhire, about ſeven miles north of Hull, in 12° weſt longitude, and 53° 50′ north latitude.

It ſends two members to parliament.

BEVILE′, in heraldry, a thing broken or opening like a carpenter's rule: thus we ſay, he beareth argent, a chief bevile, vert, by the name of *beverlis*. See plate XXVII. fig. 7.

BEWDLEY, a borough-town of Worceſterſhire, ſituated on the river Severn, about twelve miles north of Worceſter, in 2° 20′ weſt longitude, and 52° 25′ north latitude.

It ſends only one member to parliament.

BEWITS, in falconry, pieces of leather to which a hawk's bells are faſtened, and buttoned to his legs.

BEY, among the Turks, ſignifies a governor of a country or town. The Turks write it begh, or bek, but pronounce it bey.

This word is particularly applied to a lord of a banner, whom, in the ſame language, they call ſangiacbeg or bey. Every province in Turky is divided into ſeven ſangiacs, or banners, each of which qualifies a bey, and theſe are all commanded by the governor of the province, whom they alſo call begler-beg, that is, lord of all the beghs or beys of the province: theſe beys are much the ſame as bannerets were formerly in England.

BEY *of Tunis*, the ſame with the dey of Algiers, is the prince or king of that kingdom.

BEZANT, or BESANT. See BESANT.

BEZOAR, in a general ſenſe, an antidote, or medicine intended to prevent the fatal effects of poiſon.

Oriental BEZOAR, a moderately hard and heavy ſtone, very variable and uncertain in ſize, ſhape, and colour. It is generally of a round form, and its ſize is between that of a horſe-bean, and that of a ſmall wallnut, though there are ſome larger, and ſome ſmaller than peas. The ordinary colour is a duſkiſh olive or greeniſh brown.

It is always ſmooth and gloſſy on the ſurface, and, when broken, is found to conſiſt of a great number of coats or cruſts of ſtony matter, laid one over another, and often formed upon a piece of ſtick, or ſeed of a fruit, or ſome ſuch thing, for a nucleus, or baſis.

This is a drug of very great price, and of very great fame; but it is not of the number of thoſe things that have been proved to deſerve the repute they ſtand in. It is brought to us from Perſia, and many parts of the Eaſt Indies; it is to be choſen entire, not in ſcraps and fragments; of a greeniſh or olive colour, with ſome mixture of grey in it, and ſuch as, when rubbed on paper, before whitened with ceruſs, gives a yellowiſh colour.

The oriental bezoar is, like the pearl, a diſtemper in the animal that produces it, and is a concretion of ſtony matter in the ſtomach of a quadruped of the goat-claſs, called *caper bezoarticus* and *hircus bezoarticus* by Aldrovand, Johnſton, and others; but Ray calls it *gazella indica cornubus rectis*, &c.

In the ſtomach of this animal are found from one to five or ſix of theſe ſtones.

Great things are ſaid of the medicinal virtues of this ſtone, as a cordial, ſudorific, alexipharmic: but, at preſent, phyſicians never preſcribe it ſingly.

Occidental BEZOAR. This ſtone is brought from Peru and Mexico chiefly: the creature in whoſe ſtomach it is found, is deſcribed by Hernandez under the name of *mozarna ſeu cervus*, and by Johnſton, under that of *capreolus marinus*.

This bezoar is ſaid to poſſeſs all the virtues of the oriental, but in a more remiſs degree, and therefore it requires to be given in a larger doſe.

Monkey-BEZOAR. This is a very rare and valuable ſtone found in a ſpecies of monkey common in the Eaſt Indies, and in America, and deſcribed by Marcgrave under the name of *guanibas*; great numbers

bers of which are killed in hopes of bezoars, but it is very rare to find a ſtone in them.

The great virtues aſcribed to this ſtone, have ſet it at ſo high a price, that poſſeſſors of oriental bezoars, reſembling it in colour, have often pretended to call them by this name.

Porcupine BEZOAR, or the *pedro del porco*, the hog-ſtone, ſo called from an opinion that it was taken from an animal of the hog-kind, tho' it is certain that they are always taken from the porcupine. This ſtone is of a yellow or browniſh colour: the Indians ſet a great value on it as a remedy againſt epidemical diſeaſes, common in that part of the world, ariſing from a diſtempered bile. They eſteem it as an univerſal remedy, and give it againſt poiſons, and malignant fevers; and the Europeans look upon it as a good remedy in the ſmall-pox.

German BEZOARS, a ſtone found in the ſtomach of an animal of the goat-kind, called rupi-capra, or chamois.

The virtues of this bezoar are ſaid to equal, if not to excel, the oriental bezoar. It is reported to be a great remedy in malignant fevers, as alſo in the plague; and has the reputation of expelling poiſon. This bezoar is in uſe in the german ſhops, but in ours is ſcarce known.

Mineral BEZOAR, *bezoardicum minerale*, a preparation of butter of antimony, corrected with ſpirit of nitre. Then the matter is powdered and calcined in a crucible; after which it is edulcorated by waſhing, and ſpirit of wine burnt on it three or four times.

It is ſaid to eradicate leproſies in the moſt obſtinate caſes of that kind, if rightly managed. It is reported to be a very great ſudorific, and is given in malignant fevers, in the ſmall-pox and meaſles, and againſt the bites of venemous animals.

BEZOARDICUM *martiare*, or the bezoar of Mars, a preparation of the crocus of Mars, diſſolved with butter of antimony. This medicine ſtops hepatic and other fluxes, and ſtrengthens the viſcera.

BEZOARDICUM *lunare*, or the bezoar of ſilver, is made by mixing rectified butter of antimony with fine ſilver, diſſolved in ſpirit of nitre, upon which a powder falls to the bottom, which is the bezoar. This medicine is reckoned a ſpecific in epileptics, convulſions, megrims, and apoplexies. It is anodyne, ſudorific, and of effect in curing the eryſipelas.

BEZOARDICUM *joviale*, or bezoar of Jupiter, a greyiſh powder, prepared from regulus of antimony and tin, mixed with mercury ſublimate, and diſtilled in a retort.

This is a ſtrong diaphoretic, and of ſingular efficacy in diſorders of the womb, as alſo in fevers, the plague and ſcurvy.

BEZOARDIC, an appellation given to whatever partakes of the nature of bezoar; alſo to compound medicines whereof bezoar makes an ingredient. See the article BEZOAR.

BIAS, or BIASS, in a general ſenſe, the inclination, or bent of a perſon's mind, to one thing more than another.

It alſo ſignifies the lead or weight put into a bowl, that draws or turns the courſe of it any way to which the bias looks.

BIBITORY *muſcle*, the ſame with the adductor oculi. See ADDUCTOR.

BIBLE, βιβλιον, the book, a name given by chriſtians, by way of eminence, to a collection of the ſacred writings.

This collection of the ſacred writings, containing thoſe of the Old and New Teſtament, is juſtly looked upon as the foundation of the jewiſh as well as the chriſtian religion. The Jews, it is true, acknowledge only the ſcriptures of the Old Teſtament, the correcting and publiſhing of which, is unanimouſly aſcribed both by the Jews and the chriſtians to Ezra. Some of the antient fathers, on no other foundation than that fabulous and apocryphal book, the ſecond book of Eſdras, pretend that the ſcriptures were intirely loſt in the babyloniſh captivity, and that Ezra had reſtored them again by divine revelation. What is certain is, that in the reign of Joſiah, there were no other books of the law extant, beſides that found in the temple by Hilkiah; from which original, that pious king ordered copies to be immediately written out, and ſearch made for all the parts of the ſcriptures; by which means copies of the whole became pretty numerous among the people, who carried them with them into captivity. After the return of the Jews from the babyloniſh captivity, Ezra got together as many copies as he could of the ſacred writings, and out of them all prepared a correct edition, diſpoſing the ſeveral books in their natural order, and ſettling

the canon of the ſcripture for his time; having publiſhed them according to the opinion of moſt learned men, in the chaldee character, as the Jews, upon their return from the captivity, brought with them the chaldaic language, which from that time became their mother tongue, and probably gave birth to the chaldee tranſlation of their ſcriptures.

Chaldee BIBLE is only the gloſſes, or expoſitions made by the Jews when they ſpoke the chaldee tongue: whence it is called *targumim*, or paraphraſes, as not being a ſtrict verſion of the ſcriptures.

Hebrew BIBLE. There is, in the church of St. Dominic, in Bononia, a copy of the hebrew ſcriptures, which they pretend to be the original copy, written by Ezra himſelf. It is written in a fair character, upon a ſort of leather, and made up into a roll, after the antient manner: but its having the vowel points annexed, and the writing being freſh and fair, without any decay, are circumſtances which prove the novelty of the copy.

Greek BIBLE. It is a diſpute among authors, whether there was a greek verſion of the Old Teſtament, more antient than that of the ſeventy-two Jews employed by Ptolemy Philadelphus to tranſlate that book: before our Saviour's time, there was no other verſion of the Old Teſtament beſides that which went under the name of the LXX. See the article SEPTUAGINT.

But after the eſtabliſhment of chriſtianity, ſome authors undertook new tranſlations of the bible, under pretence of making them more conformable to the hebrew text. There have been about ſix of theſe verſions, ſome whereof are charged with having corrupted ſeveral paſſages of the prophets relating to Jeſus Chriſt; others have been thought too free in their verſions, and others have been found fault with, for having confined themſelves too ſervilely to the letter.

Latin BIBLE. It is beyond diſpute, that the latin churches had, even in the firſt ages, a tranſlation of the bible in their language; which being the vulgar language, and conſequently underſtood by every body, occaſioned a vaſt number of latin verſions. Among theſe there was one which was generally received, and called by St. Jerom, the vulgar or common tranſlation. St Auſtin gives this verſion the name of the italic, and prefers it to all the reſt. See VULGATE.

There were ſeveral other tranſlations of the bible into latin, the moſt remarkable of which are the verſions of St. Jerom, Santes Pagninus, cardinal Cajetan, and Iſiodore Clarius, all from the hebrew text. Beſides theſe tranſlations by catholic authors, there are ſome made by proteſtant tranſlators of the hebrew; the moſt eminent of their verſions are thoſe of Sebaſtian Munſter, Leo Juda, Sebaſtian Caſtalio, Theodore Beza, Le Clerc, &c.

Syriac BIBLE. The Syrians have in their language a verſion of the Old Teſtament, which they pretend to be of great antiquity, moſt part of which they ſay was made in Solomon's time, and the reſt in the time of Abgarus king of Edeſſa.

Arabic BIBLE. The arabic verſions of the bible are of two ſorts, the one done by chriſtians, the other by jews. There are alſo ſeveral arabic verſions of particular books of ſcripture, as a tranſlation of the pentateuch from the ſyraic, and another of the ſame from the ſeptuagint, and two other verſions of the pentateuch, the manuſcripts of which are in the bodleian library.

The goſpel being preached in all nations, the bible, which is the foundation of the chriſtian religion, was tranſlated into the reſpective languages of each nation; as the egyptian or coptic, the indian, perſian, armenian, ethiopic, ſcythian, ſarmatian, ſclavonian, poliſh, bohemian, german, engliſh, &c.

The books of the bible are divided by the Jews into three claſſes, *viz.* the law, the prophets, and the hagiographers; a diviſion which they are ſuppoſed to borrow from Ezra himſelf.

Each book is ſubdivided into ſections, or *paraſches*; which ſome will have to have been as old as Moſes, though others, with more probability, aſcribe it to the ſame Ezra. Theſe were ſubdivided into verſes, *peſuchim*, marked in the hebrew bible by two great points, called *ſoph paſuch*, at the end of each. For the diviſion of the bible into chapters, as we now have it, it is of much later date.

Divers of the antient bible-books appear to be irrecoverably loſt, whether it be that the copies of them periſhed, or that Eſdras threw them out of his canon. Hence it is, that, in the books ſtill extant, we find divers citations of, and references to, others, which are now no more; as the book of Jaſher, the book of the wars of the Lord, annals of the kings of Judah and Iſrael, part of Solomon's three thouſand proverbs, and his thouſand and five ſongs, beſides his books on plants, animals,

mals, fishes, insects, &c. To which may be added, a book of Jeremiah, wherein he enjoined the captives who went to Babylon to take the sacred fire and conceal it; also the precepts which that prophet gave the Jews to preserve themselves from idolatry, and his lamentations on the death of king Josiah.

The jewish canon of scripture then was settled by Ezra; yet not so but that several variations have been since made in it: Malachi, for instance, could not be put in the bible by him, since that prophet is allowed to have lived after Ezra; nor could Nehemiah be there, since mention is made in that book of Jaddua as high-priest, and of Darius Codomannus as king of Persia, who were, at least, an hundred years later than Ezra. It may be added, that, in the first book of Chronicles, the genealogy of the sons of Zerubbabel is carried down for so many generations, as must necessarily bring it to the time of Alexander; and consequently this book could not be in the canon in Ezra's days. It is probable the two books of Chronicles, Ezra, Nehemiah, Esther, and Malachi, were adopted into the bible in the time of Simon the Just, the last of the men of the great synagogue.

BIBLIOTHECA, in its original and proper sense, denotes a library, or place for depositing books.

BIBLIOTHECA, in matters of literature, denotes a treatise giving an account of all the writers on a certain subject; thus, we have bibliothecas of theology, law, philosophy, &c.

There are likewise universal bibliothecas, which treat indifferently of all kinds of books; also select bibliothecas, which give an account of none but authors of reputation.

Many of the bibliothecas agree, in most respects, with what are otherwise called memoirs or journals of literature, except that these last are confined to new books; but there are other bibliothecas, that differ in nothing from catalogues of the writers on certain subjects.

BIBLISTS, *biblistæ*, so the roman catholics call those christians, that make scripture the sole rule of faith; in which sense, all protestants either are, or ought to be, biblists.

BIBRACH, an imperial city of Swabia, in Germany, about twenty miles south-west of Ulm: east longitude 9° 30′, and north latitude 48° 12′.

BICE, or BISE, among painters, a blue colour prepared from the lapis armenus. Bice bears the best body of all bright blues used in common work, as house-painting, &c. but it is the palest in colour. It works indifferently well, but inclines a little to sandy, and therefore requires good grinding. Next to ultramarine, which is too dear to be used in common work, it lies best near the eye of all other blues.

BICEPS, in anatomy, the name of several muscles; as the

BICEPS HUMERI, or CUBITI. This being a muscle of the arm, has two heads; the first of which arises, with a long, round tendon, from the upper edge of the acetabulum scapulæ, running under the ligament of the articulation, in a channel, on the head of the shoulder-bone, wherein it is inclosed by a proper ligament; the other arises with a somewhat broad, flat, and long tendon, at the extremity of the processus coracoides scapulæ; in its descent, it strictly adheres to the coracobrachialis, and parting from it, both these heads compose a large fleshy belly, which becoming tendinous near the cubit, is inserted by a strong round tendon to the tubercle, at the upper head of the radius. When this muscle acts, the cubit is bended.

BICEPS TIBIÆ, or FEMORIS, a muscle of the leg with two heads; the superior arising with a round tendon from the protuberance of the ischium; and the other, being the shortest, from the lower part of the os femoris: both which join together, and are inserted by one tendon into the superior and external part of the perone.

Besides the office commonly assigned to this muscle, in bending the tibia, together with the sartorius and membranosus, it is likewise employed in turning the leg, together with the foot and toes, outwards when we sit with the knees bended.

BICHET, a quantity, or measure of corn, which differs according to the places where it is used. The bichet is not a wooden measure, as the minot at Paris, or the bushel at London, but is compounded of several certain measures. It is used in many parts of France, &c.

BICHET, a certain quantity of land, namely, as much as may be sown by a bichet of corn.

BICLINIUM, in roman antiquity, a chamber with two beds in it; or when two beds only were round a table. See BED.

BICORNIS,

BICORNIS, in anatomy, a name for the os hyoides. See the article HYOIDES.

BICORNIS MUSCULUS, a name for the extenſor carpi radialis.

BIDDING *of the bans*, the ſame with what is otherwiſe called aſking. See the article MARRIAGE.

BIDDING, in a commercial ſenſe, the offering a ſum of money, or a certain price, for any ware or merchandize; and when any thing is ſold by auction, a perſon who has a mind to have it, muſt offer ſomething more for it than the perſon who bade laſt.

BIDDER, he that bids money for any merchandize that is ſelling by auction: the beſt, or laſt bidder, is he who offers moſt money for it. See the articles SALE, and SALE *by inch of candle*.

BIDENS, in botany, a genus of the *ſyngeneſia polygamia æqualis* claſs of plants. The compound flower is uniform and tubuloſe, and the proper one infundibuliform. The ſeed is ſingle, obtuſe, and crowned with two or more erect and ſharp awns. See plate XXVIII. fig. 1.

This plant is common in wet places.

BIDENTAL, in roman antiquity, a place blaſted with lightening, which was immediately conſecrated by an haruſpex, with the ſacrifice of a bidens. This place was afterwards accounted ſacred, and it was unlawful to enter it, or to tread upon it; for which reaſon it was commonly ſurrounded with a ditch, wall, hedge, ropes, &c. See the next article.

BIDENTALES, in roman antiquity, prieſts inſtituted to perform certain ceremonies and expiations when thunder fell on any place. Their principal office was the ſacrificing a ſheep of two years old, which in latin is called *bidens*; from whence the place ſtruck with thunder got the name of bidental.

The bidentales conſtituted a college, or decury.

BIDON, a liquid meaſure, containing about five pints of Paris, that is, about five quarts engliſh wine-meaſure. It is ſeldom uſed but among ſhips crews.

BIEL, a town of the canton of Bern, in Switzerland, ſituated at the north end of a lake to which it gives name, about fifteen miles north-weſt of the city of Bern: eaſt long. 7°, and north lat. 47° 15′.

BIELSKI, a town of Polachia, in Poland, about ſixty-two miles ſouth of Grodno: eaſt long. 24°, and north lat. 53°.

BIELSKI, or BIHELA, is alſo a town of Smolenſko, in Ruſſia: eaſt long. 35°, and north lat. 56° 40′.

BIER, a wooden machine for carrying the bodies of the dead to be burried. See the article BURIAL.

BIGA, in antiquity, a chariot drawn by two horſes a-breaſt. Chariot races, with two horſes, were introduced into the olympic games in the 93d olympiad: but the invention was much more antient, as we find that the heroes in the Iliad fought from chariots of that kind.

BIGAMY, the poſſeſſion of two wives at the ſame time. This is the interpretation of the word, in a law paſſed in 1 Jac. I. which makes bigamy felony. Among the Romans, perſons convicted of bigamy, were branded with a note of infamy; and in France, they were antiently puniſhed with death.

Bigamy, in the canon law, is when a perſon either marries two women ſucceſſively, or only marries one woman who had been married before. Both which caſes are accounted impediments to be a clerk, or to hold a biſhopric. It is alſo bigamy when a perſon marries a woman who had been debauched before; or when he hath known his own wife, after ſhe has been debauched by another.

The romaniſts make a kind of bigamy by interpretation; as when a perſon in holy orders, or that has made profeſſion of ſome monaſtic order, marries. This the biſhop can diſpenſe with on ſome occaſions.

Spiritual bigamy is when a perſon holds two incompatible benefices, as two biſhoprics, two vicarages, &c.

BIGGLESWADE, a market town in Bedfordſhire, ſituated on the river Ivel, about eight miles ſouth-eaſt of Bedford: weſt longitude 20′, north lat. 52° 5′.

BIGNESS, or MAGNITUDE. See the article MAGNITUDE.

BIGNONIA, the TRUMPET-FLOWER, in botany, a genus of the *didynamia-angioſpermia* claſs. The flower is monopetalous, with a mouth campanulated, and divided into five ſegments: the fruit is a pod with two cells and two valves, containing ſeveral imbricated, compreſſed, and winged ſeeds. There are no medicinal virtues aſcribed to this plant. See plate XXVIII. fig. 2.

BIGOT, a perſon fooliſhly obſtinate and perverſely wedded to any opinion, but particularly an opinion of a religious nature.

BILAN-

BILANCHS DEFERENDIS, in law, a writ directed to a corporation for carrying weights to a haven, there to weigh wool that persons were formerly licensed to transport.

BILANDER, a small flat-bottomed vessel, with only one large mast and sail, and its deck raised half a foot above the plat-board. See the article SHIP.

BILARY PORE, *porus bilarius*. See the article PORUS.

BILATERAL, in a general sense, denotes something with two sides. Hence,

Bilateral cognation is kinship both by the father and mother side.

BILBOA, the capital of the province of Biscay, in Spain, situated near the mouth of the river Ibaicabal, which, falling into the sea a little below it, forms a good harbour: west longitude 3°, and north latitude 43° 30'.

BILBOWS, a punishment at sea, answering to the stocks at land. The offender is laid in irons, or stocks, which are more or less ponderous, according to the quality of the offence of which he is guilty.

BILDESTON, a market town of Suffolk, about ten miles south-east of Bury: east longitude 40', and north lat. 52° 20'.

BILDGE of a ship, the bottom of her floor, or the breadth of the place the ship rests on when she is aground. Therefore, bildge-water is that which lies on her floor, and cannot go to the well of the pump: and bildge-pumps, or burr-pumps, are those that carry off the bildge-water. They likewise say the ship is bildged, when she has some of her timber struck off on a rock or anchor, and springs a leak.

BILE, a yellow, bitter juice, separated from the blood in the liver, collected in the porus bilarius and gall bladder, and thence discharged by the common duct into the duodenum.

The bile is properly of two kinds, and is distinguished under them by the names of cystic and hepatic. The hepatic bile is thin, almost insipid, and scarce coloured; the cystic bile is thicker, more coloured, and very bitter.

This last, most properly called bile, as the first is denominated gall, is separated immediately from the glands of the liver into the porus bilarius. Its nature is such as to resist acids, and being mixed with other fluids, to give them the like property; and by a chemical analysis, is observed to afford some sulphur, or oil, some volatile salt, and a good deal of fixed salt; in which particular it differs from all other animal liquors, and a moderate quantity of a caput mortuum or earth: the basis is phlegm.

As to the manner in which the bile is secreted in the liver, there are various opinions. Some maintain, that the pores of the secretory glands of the liver, have a certain configuration and magnitude, to which the particles of the bile floating in the blood, being just answerable both in bulk and figure, are admitted in, and all the rest excluded. Others have recourse to a ferment which they suppose to reside in the liver, by means of which, the particles of the blood, in their passage through the secretory ducts, assume the form of bile. Others maintain, that the fluids contained in the blood of the vena porta, apply indifferently to the apertures of the secretory tubes, contiguous to the extremities of the vena porta, and to the extreme branches of the vena cava; that the pores of the cava being too little, and those of the porta large enough to admit certain particles, these being separated from the society of the essential part of the blood, and exposed to the action of the bilary vessels, constitute a new humour distinct from the blood, called bile. Dr. Keil accounts for the secretion of the bile, from the strong attraction between the particles of which it is composed. But all this is very systematical. As to the quantity of the bile secreted in the liver, we are ignorant, as Dr. Haller observes, of the velocity with which the blood of the mesentery circulates; we are ignorant of the causes which may either accelerate or retard its velocity; we have not the diameters of the vessels precisely ascertained, nor indeed do they remain invariably the same; and consequently were we to pretend to fix the quantity of bile secreted in the liver in any given time, we should certainly be very erroneous in our calculations.

The use of the bile is to attenuate the chyle, to mix the oleagenous parts of the blood with the aqueous, to stimulate the intestines, and in part to change the acid of the chyle. All these effects the cystic bile produces in a greater, and the hepatic in a less degree.

The bile is a juice of great importance with regard to the good or ill habit of the animal,

animal. We have already ſeen how it operates upon the chyle, the blood, &c. to which we may add, that it likewiſe aſſiſts in digeſtion, by promoting putrefaction. A redundance of bile occaſions many and terrible diſeaſes, which, according to to the ſeat of the humors, their acrimony, or vent given them, will appear in the ſhape of a remitting or intermitting fever, a cholera, or dyſentery. Too great an evacuation of the bile, either upwards or downwards, robs the chylefaction of its main inſtrument. Hence it prevents digeſtion, ſecretion, excretion of the fæces, and produces an acid temperature, coldneſs, weakneſs, paleneſs and ſwoonings. And if the bile be prevented in its diſcharge into the inteſtines, it produces a jaundice.

Of atra bilis, or black bile, Boerhaave diſtinguiſhes three ſorts. 1ſt. The mildeſt, ariſing from the matter of the blood put into too great a motion, which hence takes the name of aduſt: the 2d is an aggravation of the firſt, ariſing from the ſame cauſes, only heightened: and the 3d is a corrupt parched bile, which is the worſt of all. See the article BILIOUS.

BILEDULGERID, one of the diviſions of Africa, having Barbary on the north, and Zaara, or the deſart, on the ſouth.

BILEVELT, a town of Weſtphalia, in Germany, about ſeven miles ſouth-eaſt of Ravenſburg: eaſt longitude 8° 15′, north latitude 52°.

It is ſubject to the king of Pruſſia.

BILINGUIS, in a general ſenſe, ſignifies one that ſpeaks two languages; but in law, is uſed for a jury that paſſes in any caſe between an engliſhman and a foreigner, whereof part ought to be engliſh, and part ſtrangers.

BILIOUS, in general, denotes ſomething belonging to, or partaking of, the nature of bile. Hence,

BILIOUS FEVERS are thoſe occaſioned by the over-copiouſneſs, or bad qualities of the bile. See the article BILE.

Concerning the bilious fever, which Dr. Pringle ſays is epidemic in marſhy countries and camps, he obſerves, that it begins with chilneſs and laſſitude, pains in the head and bones, and a diſorder at the ſtomach. At night the perſon gets no reſt, and often becomes delirious; but, generally, in the morning, an imperfect ſweat brings on a remiſſion of all the ſymptoms. In the evening, the paroxyſm returns, but without any cold fit, and is commonly worſe than before. On the ſecond morning, it remits as before; and theſe periods go on daily, till it inſenſibly changes either into a continued or an intermitting ſhape.

The doctor enumerates other ſymptoms of this terrible diſeaſe, as crudeneſs of the urine, bilious ſtools, coſtiveneſs, &c. and obſerves, that its cure, before it becomes continued, is to be attempted by evacuations, the neutral ſalts, and the bark. Bleeding he judges indiſpenſible; which ſhould be repeated once, or oftener, according to the urgency of the ſymptoms. After bleeding, it is proper to give an emetic during the remiſſion of the fever; but if the ſtomach be inflamed, vomits are dangerous, and therefore ought never to be given. Ipecacuanha, he obſerves, is the ſafeſt and eaſieſt, but antimonials make the moſt efficacious vomits. If the body remains coſtive, it is proper to open it by lenient phyſic. He likewiſe recommends ſalt of wormwood, lemon-juice, ſpiritus mindereri, and the bark; which laſt ought not to be given till the urine breaks, and the intermiſſions take place. Bleeding and purging are alſo neceſſary before the bark is given, which he thinks anſwers beſt in ſubſtance, adminiſtred in rheniſh wine, after ſtanding a night in infuſion.

If it changes into a continued fever, bleeding becomes neceſſary; and bliſters are not only uſeful, but the very beſt remedy: to theſe may be joined the neutral ſalts, and diaphoretic powders.

The doctor farther obſerves, that tho' a ſweat be the proper criſis, it ought never to be promoted by theriaca, or the like hot medicines; unleſs the pulſe ſhould ſink, and the petechiæ, or other bad ſymptoms, appear: in which caſe, the warmer alexipharmics are highly neceſſary, as the diſeaſe has then changed into a malignant fever. See the article MALIGNANT.

BILIOUS COLIC. See the article COLIC.

BILL, an inſtrument made of iron, edged in the form of a creſcent, and adapted to a handle. It is uſed by plumbers, to perform ſeveral parts of their work; by baſket-makers, to cut the largeſt pieces of cheſnut trees and other wood; and by gardeners, to prune trees. When ſhort, it is called a hand-bill, and when long, a hedge-bill.

BILL ſignifies alſo a paper, either written or printed, in very large characters, which

which is poſted up in ſome open and public place, to give notice of the ſale of any merchandize or ſhip, or of the ſailing of any veſſel into foreign parts. The great conveniency of advertiſing in the public papers, makes bills of this nature leſs neceſſary in England than in other countries.

BILL *in trade*, both wholeſale and retail, as alſo among workmen, ſignifies an account of merchandizes or goods delivered to a perſon, or of work done for one. In thoſe bills, muſt be ſet down the ſums of money received on account, which ought to be deducted from the ſum total.

Settled BILL, a bill at the bottom of which, they to whom the goods are delivered, acknowledge that they have received them; that they are ſatisfied with the price, and promiſe to pay it. As ſoon as a bill is ſettled, the merchant or tradeſman is ſure againſt all exceptions at law, and may claim his debt even during thirty years.

BILL *of credit*, that which a merchant or banker gives to a perſon whom he can truſt, impowering him to receive money from his correſpondents in foreign countries. Though bills of credit be different from bills of exchange, yet they enjoy the ſame privileges; for the money paid in conſequence of them, is recoverable by law.

BILL *of entry*, an account of the goods entered at the cuſtom-houſe, both inwards and outwards. In this bill muſt be expreſſed, the merchant exporting or importing; the quantity of merchandize, and the divers ſpecies thereof; and whither tranſported, or from whence.

BILL *of exchange*, a piece of paper on which is written a ſhort order, given by a merchant, *&c.* for paying to ſuch a perſon, or his order, and in ſome countries to the bearer in a diſtant place, a ſum of money equivalent to that which ſuch a merchant, *&c.* has received in his dwelling-houſe.

There are three things neceſſary to conſtitute a bill of exchange. 1. That it be drawn in one city upon another. 2. That there be three perſons concerned, the drawer, the preſenter, or perſon for whom it is drawn, and the acceptor, or he on whom it is drawn. And, 3. That it make mention, that the value which the drawer has received, is either in bills of exchange, in money, merchandize, or other effects, which are to be expreſſed.

These bills are made payable either a ſight, or ſo many days, weeks, or months after date; the ſpace of a month being called uſance, and two or three months after date, double or treble uſance. There is a difference between an inland bill and foreign bill; for an inland bill of exchange, is ſaid to be only in the nature of a letter; but a foreign or outland bill is more regarded in law; becauſe it is for the advantage of commerce with other countries, which makes it of a public concern.

Not only the drawer, but every indorſer of a bill is liable for the payment thereof; for an indorſer charges himſelf in the ſame manner, as if he had originally drawn the bill: and a plaintiff, in an action in ſuch caſe, is not obliged to prove the drawer's hand, becauſe the indorſer is as a new drawer; but he muſt make proof that he demanded the money of the drawer, or drawers, or that he ſought after, and could not find them in convenient time: for, by the cuſtom among merchants, the indorſee is to receive the money of the firſt drawer, if he can, and if he cannot, then, and not before the indorſer muſt anſwer it.

The forging bills of exchange, or any acceptance, and ſtealing ſuch bills for money is felony.

BILL *of lading*, an acknowledgment ſigned by the maſter of a ſhip, and given to a merchant, *&c.* containing an account of the goods which the maſter has received on board from that merchant, *&c.* with a promiſe to deliver them at an intended place for a certain ſalary. Each bill of lading muſt be treble, one for the merchant who loads the goods, another to be ſent to the perſon to whom they are conſigned, and the third to remain in the hands of the maſter of the ſhip. It muſt be obſerved, however, that a bill of lading is uſed only when the goods ſent on board a ſhip are but part of the cargo: for when a merchant loads a whole veſſel for his own perſonal account, the deed paſſed between him and the maſter of the ſhip is called charter-party. See the article CHARTER-PARTY.

BILL *of parcels*, an account given by the ſeller to the buyer, containing the particulars of all the ſorts and prices of the goods bought.

BILL *of ſale*, is when a perſon wanting a ſum of money, delivers goods as a ſecurity to the lender, to whom he gives

this bill, impowering him to ſell the goods, in caſe the ſum borrowed is not repaid, with intereſt, at the appointed time.

BILL *of ſtore*, a licence granted at the cuſtom-houſe to merchants, by which they have liberty to carry, cuſtom-free, all ſuch ſtores and proviſions as they may have occaſion for during their voyage.

BILL *of ſufferance*, a licence granted to a merchant at the cuſtom-houſe, ſuffering him to trade from one engliſh port to another, without paying cuſtom.

Bank-BILL, a private inſtrument whereby private perſons become intitled to a part in the bank ſtock. See the article BANK.

BILL, in law, a ſecurity for money under the hand, and ſometimes the ſeal, of the debtor. It is of two ſorts, a ſingle bill without a penalty, or a bill with a penalty, called a penal bill; which laſt is all one with what we call a bond or obligation, only it has not a condition. See the article BOND.

BILL denotes alſo a declaration, in writing, expreſſing either ſome wrong the complainant has ſuffered by the defendant, or elſe a fault that the party complained of has committed againſt ſome law or ſtatute of the realm.

This bill is ſometimes exhibited to juſtices at the general aſſiſes, by way of indictment, or referred to others having juriſdiction; but more eſpecially is addreſſed to the lord-chancellor, for inconſcionable wrongs done. It contains the thing or fact complained of, the damage ſuſtained, and a petition or proceſs againſt the defendant for redreſs; and is uſed both in criminal and civil caſes. In a criminal caſe, the words

BILLA VERA are indorſed by the grand jury upon a preſentment, thereby ſignifying, that they find the ſame made with probable evidence, and on that account worthy of farther conſideration.

BILL *in parliament*, a paper containing propoſitions offered to the houſes to be paſſed by them, and then preſented to the king to paſs into a law.

BILL *of attainder*, BILL *of appeal*, BILL *of mortality*, } See { ATTAINDER. APPEAL. MORTALITY.

BILLERICAY, a market-town of Eſſex, about twenty miles eaſt of London: eaſt longitude 20′, north latitude 51° 35′.

BILLET, in heraldry, a bearing in form of a long ſquare. They are ſuppoſed to repreſent pieces of cloth of gold or ſilver, but Guilim thinks they repreſent a letter ſealed up; and other authors take them for bricks.

Billeté ſignifies that the eſcutcheon is all over ſtrewed with billets, the number not aſcertained. See plate XXVIII. fig. 3.

BILLET-WOOD, ſmall wood for fuel, cut three feet and four inches long, and ſeven inches and a half in compaſs; the aſſize of which is to be inquired of by juſtices.

BILLETTING, in military affairs, is the quartering of ſoldiers in the houſes of a town or village. And among fox-hunters, it ſignifies the ordure and dung of a fox.

BILLIARDS, an ingenious kind of game played on an oblong table, covered with green cloth, and placed exactly level, with little ivory balls, which are driven by crooked ſticks, made on purpoſe, into hazards or holes on the edge and corners of the table, according to certain rules of the game.

BILLINGHAM, a market-town of Northumberland, about twenty five miles north-weſt of Newcaſtle: weſt longitude 1° 40′, and north latitude 55° 20′.

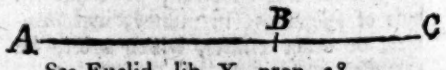
BILLON, in the hiſtory of coins, a compoſition of precious and baſe metals, where the latter predominant. Wherefore gold under twelve carats fine, is called billon of gold; and ſilver under ſix penny-weight, billon of ſilver. So little attention was paid formerly to the purity of gold and ſilver, that the term billon of gold, was applied only to that which was under twenty-one carats; and billon of ſilver to that which was lower than ten penny-weight.

BILLON, in geography, a town of the lower Auvergne, in the Lyonois, in France, about ten miles ſouth-eaſt of Clermont: eaſt longitude 3° 25′, and north latitude 45° 40′.

BILSDON, a market-town of Leiceſterſhire, about ſeven miles ſouth-eaſt of Leiceſter: weſt longitude 50′, and north latitude 52° 40′.

BILSEN, a town of Germany, about ſix miles weſt of Maeſtricht: eaſt longitude 5° 30′, and north latitude 51°.

BIMEDIAL, in mathematics. If two medial lines, as AB and BC, commenſurable only in power, containing a rational rectangle, are compounded, the whole line AC will be irrational, and is called a firſt bimedial line.



See Euclid. lib. X. prop. 38.

BIMLIPATAN, a port-town of Golconda,

da in India, where the Dutch have a factory. It is situated on the west side of the Bay of Bengal, in 83° east longitude, and 18° north latitude.

BINARY ARITHMETIC, that wherein unity, or 1 and 0, are only used.

This was the invention of Mr. Leibnitz, who shews it to be very expeditious in discovering the properties of numbers, and in constructing tables; and Mr. Dangecourt, in the history of the royal academy of sciences, gives a specimen of it concerning arithmetical progressionals; where he shews that, because in binary arithmetic, only two characters are used, therefore the laws of progression may be more easily discovered by it than by common arithmetic.

All the characters, used in binary arithmetic are 0 and 1, and the cypher multiplies every thing by 2, as in the common arithmetic by 10. Thus, 1 is one; 10, two; 11, three; 100, four; 101, five; 110, six; 111, seven; 1000, eight; 1001, nine; 1010, ten; which is built on the same principles with common arithmetic.

The author, however, does not recommend this method for common use, because of the great number of figures required to express a number; and adds, that if the common progression were from 12 to 12, or from 16 to 16, it would be still more expeditious.

BINARY MEASURE, in music, is a measure which is beaten equally, or where the time of rising is equal to that of falling. This is usually called common time, besides which there is a binary triple. See the articles MEASURE, TIME, and TRIPLE.

BINARY NUMBER, that composed of two units. See the article NUMBER.

BINBROKE, a market-town of Lincolnshire, about twenty-five miles north-east of Lincoln: east longitude 6′, and north latitude 53° 32′.

BINCH, a little fortified town of Hainault, ten miles east of Mons: east longitude 4° 20′, and north latitude 50° 30′.

BINDING, among fencers, denotes the securing the adversary's sword, which is effected by a pressure and spring from the wrist.

BINDING, in falconry, a term which implies tiring, or when a hawk seizes.

BIND-WEED, *convolvulus*, in botany. See the article CONVOLVULUS.

BINGEN, a town of the electorate of Mentz, about sixteen miles west of that city: east longitude 7° 20′, and north latitude 50°.

BINGLEY, a market-town, in the west-riding of Yorkshire, about thirty miles west of York: west longitude 1° 40′, and north latitude 53° 45′.

BINOCULAR TELESCOPE, a kind of dioptric telescope fitted with two tubes joined in such a manner, that one may see a distant object with both eyes, at the same time.

BINOMIAL, in algebra, a root consisting of two members connected by the sign + or —. Thus $a+b$ and $8-3$ are binomials, consisting of the sums and differences of these quantities.

The powers of any binomial are found by a continual multiplication of it by itself. For example, the cube or third power of $a+b$, will be found by multiplication to be $a^3+3a^2b+3ab^2+b^3$; and if the powers of $a-b$ are required, they will be found the same as the preceding, only the terms in which the exponent of b is an odd number, will be found negative. Thus, the cube of $a-b$ will be found to be $a^3-3a^2b+3ab^2-b^3$, where the second and fourth terms are negative, the exponent of b being an odd number in these terms. In general, the terms of any power of $a-b$ are positive and negative by turns.

It is to be observed, that in the first term of any power of $a+b$, the quantity a has the exponent of the power required, that in the following terms, the exponents of a decrease gradually by the same differences, *viz.* unit, and that in the last terms it is never found. The powers of b are in the contrary order; it is never found in the first term, but its exponent in the second term is unit; in the third term, its exponent is 2, and thus its exponent increases till in the last term it becomes equal to the exponent of the power required.

As the exponents of a thus decrease, and and at the same time those of b increase; the sum of their exponents is always the same, and is equal to the exponent of the power required. Thus, in the sixth power of $a+b$, *viz.* $a^6+6a^5b+15a^4b^2+20a^3b^3+15a^2b^4+6ab^5+b^6$, the exponents of a decrease in this order 6, 5, 4, 3, 2, 1, 0; and those of b increase in the contrary order 0, 1, 2, 3, 4, 5, 6. And the sum of their exponents in any term is always 6.

In general, therefore, if $a+b$ is to be raised to any power m, the terms without their coefficients will be a^m, $a^{m-1}b$, $a^{m-2}b^2$, $a^{m-3}b^3$, $a^{m-4}b^4$, $a^{m-5}b^5$, &c. continued till the exponent of b become equal to m.

The coefficients of the respective terms will be 1, m, $m \times \frac{m-1}{2}$, $m \times \frac{m-1}{2} \times \frac{m-2}{3}$, $m \times \frac{m-1}{2} \times \frac{m-2}{3} \times \frac{m-3}{4}$, $m \times \frac{m-1}{2} \times \frac{m-2}{3} \times \frac{m-3}{4} \times \frac{m-4}{5}$, &c. continued until you have one coefficient more than there are units in m. See the article COEFFICIENT.

It follows therefore by these rules, that $\overline{a+b}^m = a^m + ma^{m-1}b + m \times \frac{m-1}{2} \times a^{m-2}b^2 + m \times \frac{m-1}{2} \times \frac{m-2}{3} \times a^{m-3}b^3 + m \times \frac{m-1}{2} \times \frac{m-2}{3} \times \frac{m-3}{4} \times a^{m-4}b^4 +$, &c. which is the binomial or general theorem, for raising a quantity consisting of two terms to any power m.

The same general theorem will also serve for the evolution of binomials, because to extract any root of a given quantity, is the same thing as to raise that quantity to a power whose exponent is a fraction that has its dinominator equal to the number that expresses what kind of root is to be extracted. Thus, to extract the square root of $a+b$, is to raise $a+b$ to a power whose exponent is $\frac{1}{2}$. Now $\overline{a+b}^m$ being found as above; supposing $m=\frac{1}{2}$, you will find $\overline{a+b}^{\frac{1}{2}} = a^{\frac{1}{2}} + \frac{1}{2} \times a^{-\frac{1}{2}}b + \frac{1}{2} \times -\frac{1}{2} \times a^{-\frac{3}{2}}b^2 + \frac{1}{2} \times -\frac{1}{2} \times -\frac{1}{2}a^{-\frac{5}{2}}b^3 +$, &c. $= a^{\frac{1}{2}} + \frac{b}{2a^{\frac{1}{2}}} - \frac{b^2}{8a^{\frac{3}{2}}} + \frac{b^3}{16a^{\frac{5}{2}}}$, &c.

BIOGRAPHER, one who writes the lives of particular persons, as Plutarch, Suetonius, &c. See the next article.

BIOGRAPHY, a very entertaining and instructive species of history, containing the life of some remarkable person, or persons.

Lord Bacon regrets, that the lives of eminent men are not more frequently written; for, adds he, though kings, princes, and great personages be few; yet there are many other excellent men, who deserve better than vague reports, and barren elogies.

BIORNBURG, a town of Finland, situated on the eastern shore of the Bothnic gulph: east long. 21°, and north lat. 62.

BIOTA, in zoology, a genus of sea-insects, of a cylindric, but variable figure, with the tentacula arranged in a single series round the aperture of the mouth, at the extremity of the body.

Among the several other species of this genus is the polype. See POLYPE.

BIOUAC, in military affairs, a night-guard, performed by the whole army, when there is any apprehension of danger from the enemy.

BIPENNIS, in roman antiquity, an ax with a double edge, one of which was used in stabbing, and the other in cutting.

BIQUADRATIC POWER, in algebra, the fourth power or squared square of a number, as 16 is the biquadratic power of 2; for 2×2 is 4, and 4×4 is equal to 16.

BIQUADRATIC ROOT of a number, is the square root of its square root: thus the biquadratic root of 81 is 3; for the square root of 81 is 9, and the square root of 9 is 3.

BIQUADRATIC EQUATION, an equation where the unknown quantity of one of the terms has four dimensions.

Any biquadratic equation may be conceived as generated by the multiplication of four simple equations. Thus if $x=a$, $x=b$, $x=c$, $x=d$, or $x-a=0$, $x-b=0$, $x-c=0$, $x-d=0$; then will $x-a \times x-b \times x-c \times x-d = 0$, beget a biquadratic equation. Or it may be formed of two quadratic equations, as $x^2+bx+c \times x^2+dx+e=0$; or, lastly, it may be produced from the multiplication of one cubic and one simple equation, as $x-a \times x^3+cx^2+dx+e=0$. For the construction and resolution of biquadratic equations. See the articles EQUATION, and CONSTRUCTION *of equations*.

BIQUINTILE, an aspect of the planets, when they are 144 degrees from each other.

BIR, a city of Diarbeck, or Mesopotamia, situated on the river Euphrates, about seventy miles south-east of Aleppo; in 40° east long. and 35° 20′ north latitude.

BIRCH-TREE, in botany, betula. See the article BETULA.

BIRD,

BIRD, *avis*, in zoology, one of the six general classes of animals, the characters of which are, that their body is covered with feathers, and that they have two wings, two legs, and a bill of a firm bony or rather horny substance: add to this, that the females are all oviparous.

The knowledge of birds, of the orders and genera into which they are subdivided, and of their natures, uses, figures, &c. constitutes a particular science, under the name of ornithology.

Birds have been usually divided into terrestrial and aquatic, or land and water birds; but this division is too general, as well as indeterminate: a much more certain distinction of birds is founded on the different shapes and structure of their beaks, from which alone they are naturally arranged under the six following orders. 1. The *accipitres*, or those which have the beak uncinated, or hooked. 2. The *picæ*, or those with convex and compressed beaks. 3. The *anseres*, or those with dentated or serrated beaks. 4. The *scolopaces*, or those furnished with subcylindric and obtuse beaks. 5. The *gallinæ*, comprehending such birds as have the beak of a conic form, but crooked, and the upper chap imbricated. 6. The *passeres*, or those with conic and attenuated beaks. See the articles ACCIPITER, PICÆ, &c.

We meet with several other distinctions of birds, taken from their manner of feeding; as carnivorous ones, or birds of prey; frugivorous and granivorous birds, or such as feed on fruits and the seeds of various plants; insectivorous birds, or those which feed principally on insects; and so in other cases.

As to the constituent parts of birds, it is remarkable that the head is generally small in proportion to the rest of the body; that the eyes are more plain and depressed than in quadrupeds; and that they have no external auricle, or ear. See the articles WING, BILL, TAIL, &c.

Singing birds are valued, in the book of rates, at 9 s. the dozen, and pay duty 2 s. $1\frac{85}{100}$ d. whereof 1 s. $11\frac{28}{100}$ d. is drawn back on exporting them. All other birds are valued at 12 s the dozen, and pay duty 2 s. $10\frac{47}{100}$ d. whereof 2 s $7\frac{3}{100}$ d. is drawn back.

BIRD *of paradise*. See PARADISE.

Black BIRD, the english name of the *merula vulgaris* of ornithologists. See the article MERULA.

BIRDS, in heraldry, according to their several kinds, represent either the contemplative or active life. They are the emblems of liberty, expedition, readiness, swiftness, and fear. They are more honourable bearings than fishes, because they participate more of air and fire, the two noblest and highest elements, than of earth and water.

Birds must be borne in coat-armour, as is best fitting the propriety of their natural actions of going, sitting, standing, flying, &c.

Birds that are either whole footed, or have their feet divided, and yet have no talons, are said to be membered; but the cock, and all birds of prey with sharp and hooked beaks and talons, for encounter or defence, are termed armed.

In the blazoning of birds, if their wings be not displayed, they are said to be borne close; as, he beareth an eagle, &c. close.

BIRD-LIME, a viscid substance, prepared after different ways. The most common bird-lime among us, is made from holly-bark, boiled ten or twelve hours; when the green coat being separated from the other, it is covered up a fortnight in a moist place, then pounded into a tough paste, so that no fibres of the wood are discernible, and washed in a running stream till no motes appear; put up to ferment four or five days, skimmed as often as any thing arises, and laid up for use. To use it, a third part of nut-oil, or thin grease, must be incorporated with it over the fire.

The Italians make bird lime of the berries of the misleto-tree. That which comes from Damascus is supposed to be made of sebestens: and it is said that the bark of our *lantona*, or way-faring shrubs, will make very good bird-lime.

BIRD's NEST, in botany, the english name of the neottia. See the article NEOTTIA.

BIRD's NESTS, in cookery, the nests of a small indian swallow, very delicately tasted, and frequently mixed among soups. On the sea-coasts of China, at certain seasons of the year, there are seen vast numbers of these birds; they leave the inland country at their breeding-time, and come to build in the rocks, and fashion their nests out of a spumous matter, which they find on the shore washed thither by the waves. They are of a hemispheric figure, and of the size of a goose's egg, and, in substance, much resemble the ichthyocolla or isinglass.

The

The Chineſe gather theſe neſts, and ſell them to all parts of the world; they diſſolve in broths, &c. and make a kind of jelly of a very delicious flavour.

BIREMIS, in roman antiquity, a veſſel with two rows of oars, concerning the diſpoſition of which authors are not agreed.

BIRETUM, or BIRRETUM, a ſort of black bonnet, or covering of the head, in form of a pyramid, much uſed in Italy and France about five or ſix hundred years ago, as a badge of victory, honour, or ſacerdotal preferment.

BIRKENFIELD, a town of Germany, about forty miles weſt of Mentz, ſituated in 6° 40′ eaſt longit. and 49° 45′ north latitude.

BIRMINGHAM, a large populous town in Warwickſhire, about ſixteen miles north-weſt of Coventry, ſituated in 1° 50′ weſt long. and 52° 30′ north lat.

It is remarkable for its iron manufactory.

BIROTA, or BIROTUM, in roman antiquity, a kind of vehicle, ſo denominated from its moving upon two wheels. It carried about two hundred pound weight, and was drawn by three mules.

BIRRUS, in roman antiquity, a cloak, made of woollen cloth, worn by the ſoldiers: alſo a robe worn by the prieſts or biſhops.

BIRTH, *partus*, in midwifery, ſignifies the ſame with delivery. See the article DELIVERY.

An immature birth, or that which happens before the uſual time of pregnancy is completed, is otherwiſe called an abortion. See the article ABORTION.

For the proportion of births to marriages, burials, &c. See the articles MARRIAGE, MORTALITY, &c.

After-BIRTH. See AFTER-*birth*.

BIRTH, or BIRTHING, in the ſea-language, a convenient place to moor a ſhip in; alſo a due diſtance obſerved by ſhips lying at anchor, or under ſail; and a proper place aboard for a meſs to put their cheſts, &c. is called the birth of that meſs.

BIRTH-WORT, *ariſtolochia*, in botany, a genus of the *gynandria-hexandria* claſs of plants, the flower of which conſiſts of a ſingle petal, of a ligulated form, and a pale colour; there ſtand ſeveral of them together at the alæ of the leaves: the fruit is a large roundiſh capſule, as big as an apple; the ſeeds are numerous, depreſſed, and diſpoſed in ſix cells. See plate XXVIII. fig. 4.

The roots of this plant are ſaid to be cephalic, vulnerary and uterine; they are alſo claſſed by ſome among the alexipharmics, and recommended highly in diſeaſes of the breaſt: the principal virtue, however, now aſcribed to them is that of promoting the menſes, and the lochia after delivery: it is ſaid to have ſo much force this way, as to cauſe abortion if given to a woman with child.

BIRZA, a town of Samogitia, in Poland, about forty-two miles ſouth-eaſt of Mittau, ſituated in 25° eaſt long. and 56° 35′ north latitude.

BISCAY, the moſt northerly province of Spain, from which the Bay of Biſcay takes its name.

New BISCAY, a province of Mexico, having new Mexico on the north, and Florida on the weſt.

BISCHWEILLER, a fortreſs of Alſace, ſubject to the French, ſituated about five miles weſt of Port Lewis, in 7° eaſt lon. and 48° 40′ north latitude.

BISCUTELLA, in botany, a genus of the *tetradynamia-ſiliculoſa* claſs of plants, called by Tournefort *thlaſpidium*, the flower of which is cruciform, conſiſting of four petals; and its fruit a ſmall, bilocular, erect, and compreſſed pod, containing a ſingle, roundiſh, and compreſſed ſeed.

BISERRULA, in botany, a genus of the *diadelphia-decandria* claſs of plants: the flowers are papilionaceous, ſmall, and reddiſh, ſtanding in cluſters on long pedicles; the fruit is a large pod with two cells, containing numerous kidney-ſhaped and compreſſed ſeeds.

BISERTA, a port-town of the kingdom of Tunis, in Africa, ſituated on the Mediterranean, near the place where Utica antiently ſtood, and about forty miles north of Tunis, in 9° eaſt lon. and 37° north latitude.

BISHOP, ἐπίσκοπος, a prelate, or perſon conſecrated for the ſpiritual government of a dioceſe.

Whether the diſtinction of biſhops from mere prieſts or preſbyters be of divine or human right, whether it was ſettled in the apoſtolical age, or introduced ſince, is much controverted. It is certain, that in the New Teſtament the names of biſhops and prieſts are uſed indifferently; but tradition, the fathers, and the apoſtolical conſtitutions make a diſtinction. From this laſt conſideration biſhops are conceived as the higheſt eccleſiaſtical dignities,

nities, the chief officers in the hierarchy, or œconomy of church-government, as the fathers and paſtors of the faithful, the ſucceſſors of the apoſtles, and, as ſuch, the ſuperiors of the church of Chriſt.

In the primitive church it appears that there was but one biſhop in a church, and but one church to a biſhop; the peculiar acts of the epiſcopal function were preaching the word, praying with the people, adminiſtering the two ſacraments of baptiſm and the euchariſt, taking care of the poor, ordaining of miniſters, governing his flock, excommunicating offenders, and abſolving of penitents. The election of a biſhop was jointly in the hands of the clergy and laity of the biſhopric or pariſh which became vacant; when they elected a biſhop, they preſented him to the neighbouring biſhops, for their approbation and conſent, without which his election was not valid. A biſhop thus choſen and ordained, always gave notice of his advancement to the moſt renowned biſhops of the church.

As to the form of ordination, it was thus; two biſhops held the book of the goſpels over the head of that biſhop which was ordained, and whilſt one pronounced the bleſſing, or prayer of conſecration, all the reſt of the biſhops that were preſent laid their hands upon his head.

In the church of Rome the pope has the chief right of electing biſhops, nevertheleſs ſome princes have reſerved to themſelves the right of nominating to biſhoprics, after which the pope ſends his approbation, and the bulls to the new biſhop. When a perſon hears that the pope has raiſed him to the epiſcopal dignity, he enlarges his ſhaven crown, dreſſes himſelf in purple, and if he be in Rome, he muſt go and receive the rochet from the pope; three months after having been confirmed in his election, he is conſecrated in a very ſolemn manner.

Upon the vacancy of a biſhop's ſee in England, the king grants his conge d'eſlire to the dean and chapter, to elect the perſon whom, by his letters miſſive, he hath appointed; and if they do not make the election in twenty days, they are to incur a premunire. The dean and chapter having made their election accordingly, the archbiſhop, by the king's direction, confirms the biſhop, and afterwards conſecrates him, by impoſition of hands, according to the form laid down in the Common prayer book. Hence we ſee that a biſhop differs from an archbiſhop in this, that an archbiſhop with biſhops conſecrates a biſhop, as a biſhop with prieſts conſecrates a prieſt: other diſtinctions are, that an archbiſhop viſits a province, as a biſhop a dioceſe; that an archbiſhop convocates a provincial ſynod, as a biſhop does a dioceſan one; and that the archbiſhop has canonical authority over all the biſhops of his province, as a biſhop has over the prieſts of his dioceſe.

The juriſdiction of a biſhop of the church of England conſiſts in collating benefices, granting inſtitutions, commanding inductions, taking care of the profits of vacant benefices for the uſe of the ſucceſſors, conſecrating churches and chapels, ordaining prieſts and deacons, confirming after baptiſm, granting adminiſtrations, and taking probates of wills; theſe parts of his function depend upon the eccleſiaſtical law. By the common law, he is to certify to the judges concerning legitimate and illegitimate births and marriages; and to his juriſdiction, by the ſtatute law, belongs the licenſing of phyſicians, ſurgeons, and ſchool-maſters, and the uniting of ſmall pariſhes, which laſt privilege is now peculiar to the biſhop of Norwich.

All biſhops of England are peers of the realm, except the biſhop of Man, and as ſuch ſit and vote in the houſe of lords; they are barons in a threefold manner, *viz.* feudal, in regard to the temporalities annexed to their biſhoprics; by writ, as being ſummoned by writ to parliament; and laſtly, by patent and creation: accordingly they have the precedence of all other barons, and vote as barons and biſhops, and claim all the privileges enjoyed by the temporal lords, excepting that they cannot be tried by their peers, becauſe, in caſes of blood, they themſelves cannot paſs upon the trial, for they are prohibited, by the canons of the church to be judges of life and death.

BISHOP'S COURT, an eccleſiaſtical court, held in the cathedral of each dioceſe, the judge whereof is the biſhop's chancellor, who judges by the civil and canon law; and if the dioceſe be large, he has his commiſſaries in remote parts, who hold what they call conſiſtory courts, for matters limited to them by their commiſſion.

BISHOP'S-CASTLE, a borough town in Shropſhire, ſituated on the river Ony, about

about fifteen miles ſouth-weſt of Shrewſbury; weſt long. 3°, and north latitude 52° 30′.

BISHOP AND HIS CLERKS, ſome little iſlands and rocks on the coaſt of Pembrokeſhire, not far from St. David's, very fatal to mariners.

BISHOP'S STORTFORD, a market-town in Hertfordſhire, thirty miles north of London, and only ten miles north-eaſt of Hertford; eaſt longit. 20′, and north latitude 51° 50′.

BISHOPING, a term among horſe-courſers, to denote the ſophiſtications uſed to make an old horſe appear young, a bad one good, *&c.*

BISHOPRIC, the diſtrict over which a biſhop's juriſdiction extends, otherwiſe called a dioceſe.

In England there are twenty-four biſhoprics, and two archbiſhoprics; in Scotland, none at all; in Ireland, eighteen biſhoprics and four archbiſhoprics; and in popiſh countries they are ſtill more numerous.

BISIGNANO, a city of the hither Calabria, in the kingdom of Naples; eaſt lon. 16° 45, and north latit. 39° 50′.

BISKET, a kind of bread prepared by the confectioners, of fine flour, eggs, and ſugar, and roſe or orange-water; or of flour, eggs, and ſugar, with aniſeeds and citron-peel, baked again and again in the oven, in tin or paper moulds. There are divers ſorts of biſkets, as ſeed-biſket, fruit-biſket, long-biſket, round-biſket, naples-biſket, ſpunge-biſket, *&c.*

Sea-BISKET is a ſort of bread much dried by paſſing the oven twice, to make it keep for the ſea ſervice. For long voyages they bake it four times, and prepare it ſix months before the embarkation. It will hold good a whole year.

BISMUTH, in natural hiſtory, a genus of the ſemi-metals, as they are called; the moſt uſual appearance of which is in form of an ore, intimately mixed with ſilver, a large quantity of arſenic, and an earthy matter, which yields a blue colour equal to the zaffer or ſmalt procured from cobalt.

This ore is uſually of a bright ſilvery white, and of an irregularly foliaceous ſtructure, though ſometimes found granulated. In the fuſion of this ore the ſulphur and arſenic evaporate, and the reguline matter being thereby freed from its impriſoned ſtate, runs off from the earthy matter, which remains fixed behind. See the article SMALT.

Biſmuth is ſometimes found native, in ſmall compact maſſes, of a pale lead colour on the out-ſide, but a ſilvery white within.

Biſmuth attenuates the parts of all other metals, and thereby promotes their fuſion. It is ſoluble in vinegar, like lead: diſſolved in ſtronger acids, it yields the famous coſmetic magiſtery, and is a very valuable ingredient in the mixed metals uſed in caſting types, and for bell-metal.

Biſmuth is very common in Germany, and not unfrequently found in the tin-mines of Cornwall, though little known, or at leaſt regarded there.

BISNAGAR, the capital of a province of the ſame name in the hither peninſula of India: eaſt longitude 78°, and north latitude 14°.

BISNOW, or BISCHNOU, a ſect of the Banians in the Eaſt Indies; they call their god Ram-ram, and give him a wife: they adorn his image with golden chains, necklaces of pearls, and all ſorts of precious ſtones. They ſing hymns in honour of their god, mixing their devotion with dances and the ſound of drums, flagelets, brazen baſons, and other inſtruments. This ſect lives wholly upon herbs and pulſe, butter and milk.

BISOMUM, or DISOMUM, in roman antiquity, a ſepulchre, or vault, containing two dead bodies. On the tombs of the primitive chriſtians were wont to be inſcribed the words *biſomi* or *triſomi*, or *quadriſomi*, *&c.* that by theſe means they might the eaſier calculate the number of their dead.

BISQUET, or BISKET. See BISKET.

BISSECTION, in geometry, the diviſion of a line, angle, *&c.* into two equal parts, See the articles LINE, ANGLE, *&c.*

BISSEXTILE, in chronology, a year conſiſting of three hundred and ſixty-ſix days, being the ſame with our leap-year.

The true ſolar year, or that ſpace of time which flows while the ſun is moving from any one point of the ecliptic, till he returns to the ſame point again, conſiſts of 365 days, 5 hours, 48 minutes, 57 ſeconds. The year made uſe of by the antient Egyptians conſiſted of 365 days, which being leſs than the true ſolar year by nearly ſix hours, they loſt a day every four years. Julius Cæſar being high-prieſt among the Romans, and conſidering the inconveniences ariſing from this method of computation, ordered that every fourth year ſhould have an intercalary

calary day, and that this additional day ſhould be added to the month of February; wherefore this method of computation is called the julian account, or old ſtile. See the article LEAP-YEAR.

Yet, as the true length of the year conſiſts of 365 day, 5 hours, 49 minutes nearly, it follows that, according to this way of reckoning, at the end of every four years the civil year will begin 44 minutes ſooner than it did before, conſequently in 331 years, it will anticipate by one whole day: for this reaſon pope Gregory XIII. ſet himſelf upon reforming the calendar, and finding, in the year 1582, that the equinox had anticipated ten whole days, he ordered that theſe ten days ſhould be taken out of the calendar that year, and the 11th of March ſhould be reckoned the 21ſt; and ordered that every hundred year, which, according to the julian form, was to be biſſextile, ſhould be a common year, and conſiſt of 365 days: but becauſe that was too much, every four hundred year was to to remain biſſextile. This method of computation is called the gregorean, or new ſtile; it was received in moſt foreign countries ever ſince the reforming of the calendar; and by act of parliament paſſed in 1751, it commenced in all the dominions under the crown of Great-Britain, in the year following, ordering that the natural day following the ſecond of September, ſhould be accounted the fourteenth, omitting the intermediate eleven days of the common calendar.

BISTER, or BISTRE. See BISTRE.

BISTORT, *polygonum*, in botany, a genus of the *octandria-trigynia* claſs of plants, whoſe corolla conſiſts of a ſingle petal, narrow at the baſe, and imperforated: the limb is erect, and divided into five oval and alternately connivent ſegments; the flower remains, and ſupplying the place of a pericarpium, ſurrounds the ſeed, which is ſingle, triquetrous, and acute. See plate XXVIII. fig. 5.

The root is aſtringent, vulnerary, and alexipharmic.

BISTOURY, in ſurgery, an inſtrument for making inciſions, of which there are different kinds, ſome being of the form of a lancet, others ſtrait and fixed in the handle like a knife, and others crooked with the ſharp edge on the inſide.

BISTRE, or BISTER, among painters, denotes gloſſy ſoot, pulveriſed and made into a kind of cakes, with gum-water. It is uſed to waſh their deſigns. See the article WASHING.

BIT, or BITT, an eſſential part of a bridle. Its kinds are various: 1. The muſrol, ſnaffle, or watering-bit. 2. The canon-mouth, jointed in the middle. 3. The canon with a faſt mouth, all of a piece, only kneed in the middle, to form a liberty or ſpace for the tongue; fit for horſes too ſenſible, or tickliſh, and liable to be continually bearing on the hand. 4. The canon-mouth, with the liberty in form of a pigeon's neck; proper where a horſe has too large a tongue. 5. The canon with a port mouth, and an upſet or mounting liberty; uſed where a horſe has a good mouth but a large tongue. 6. The ſcatch-mouth, with an upſet; ruder but more ſecure than a canon-mouth. 7. The canon-mouth, with a liberty; proper for a horſe with a large tongue and round bars. 8. The maſticadour, or ſlavering-bit, &c. The ſeveral parts of a ſnaffle, or curb-bit, are the mouth-piece, the cheeks and eyes, guard of the cheeks, head of the cheeks, the port, the welts, the campanel or curb and hook, the boſſes, the bolſters and rabbets, the water-chains, the ſide-bolts, bolts and rings, kirbles of the bit or curb, trench, toprol, flap, and jeive.

The importation of bits for bridles is now prohibited.

BIT alſo denotes the iron part of a piercer, augre, and the like inſtruments.

BIT, or BITTS, in ſhip-building, the name of two great timbers, uſually placed abaft the manger, in the ſhip's loof, thro' which the croſs-piece goes: the uſe of it is to belay the cable thereto, while the ſhip is at anchor.

BITCH, the female of the dog-kind. See the article DOG.

BITE, *morſus*, in ſurgery, a ſolution of continuity, made by the teeth of ſome animal, as dog, wolf, &c.

Heiſter obſerves, that the bite of enraged animals, though they were not mad at the time they inflicted them, are uſually attended with very grievous conſequences. If the wound is ſlight, the diſcharge of blood from the part is to be encouraged by preſſing it with the fingers, ſucking it in the mouth, or by the application of cupping glaſſes, or enlarging it with a lancet. It is afterwards to be waſhed with warm ſpirit of wine, and bolſters dipped in the ſame liquor, are to be applied to it, repeating the application every three

or four hours, till all danger of inflammation is gone off. If the wound be conſiderably deep, it is always neceſſary to enlarge it with the knife, unleſs it have already a very large opening; and, after applying ſpirit of wine for the firſt days, to prevent the bad ſymptoms, it may be eaſily healed with honey, or ſome digeſtive ointment, and afterwards with a vulnerary balſam, as uſual in other wounds. See the articles HYDROPHOBIA and WOUND.

BITE is alſo uſed, figuratively, for the action of ſharp bodies upon other ſubſtances: thus, a file is ſaid to bite iron, *&c.*

BITONTO, a city of the province of Barri, in the kingdom of Naples, ſituated about eight miles ſouth-weſt of Barri, in 17° 40′ eaſt long. and 41° 20′ north lat.

BITTACLE, on ſhip-board, a ſquare box ſtanding before him that ſteers the ſhip, with the compaſs placed therein, to keep and direct the ſhip in her courſe.

BITTER, *amarus*, an epithet given to all bodies of an oppoſite taſte to ſweetneſs. Bitters are accounted ſtomachic and cleanſing, and are ſaid to reſiſt putrefaction, correct acidities, and aſſiſt digeſtion; though there are not wanting ſome who will have them to be hurtful to the ſtomach, except in ſo far as their aſtringency contributes to brace the fibres.

BITTER, a ſea-term, ſignifying any turn of the cable about the bits, ſo as that the cable may be let out by little and little. And when a ſhip is ſtopped by a cable, ſhe is ſaid to be brought up by a bitter. Alſo that end of the cable which is wound about the bits is called the bitter end of the cable.

BITTER-APPLE, in botany, a name given to the *colocynthis*. Se COLOCYNTHIS.

BITTER-VETCH, the *orobus* of botaniſts. See the article OROBUS.

BITTERN, in ornithology, the engliſh name of the *ardea ſtellaris* of zoologiſts: it is about the ſize of the common heron. See the article ARDEA.

BITTERN, in the ſalt-works, the brine remaining after the ſalt is concreted: this they ladle off, that the ſalt may be taken out of the pan, and afterwards put in again; when, being farther boiled, it yields more ſalt. See the article SALT.

BITUMEN, in natural hiſtory, an inflammable foſſile ſubſtance, otherwiſe called aſphaltum. See the article ASPHALTUM. Beſides the bitumen judaicum, mentioned under the article ASPHALTUM, there are other kinds, *viz.* a hard ſtinking black kind, found in great plenty about the Dead-ſea; it yields an oil which is an excellent cement, and is ſuppoſed to be the bitumen which we are told ſupplied the place of mortar in building the walls of Babylon. 2. The browniſh black ſtinking bitumen, common in Germany, and even with us, under the name of pitch-ſtone.

BIVALVES, one of the three general claſſes of ſhell-fiſh, comprehending all thoſe, the ſhells of which are compoſed of two pieces, joined together by a hinge.

Of this claſs we have only the ſix following genera: 1. The oyſters. 2. The chamæ. 3. The muſcles. 4. The heart-ſhells. 5. The ſcallops. 6. The razor-ſhells. See the articles OYSTER, CHAMA, MUSCLE, *&c.*

BIVALVE is alſo an appellation given to ſuch pods, or capſules, as conſiſt of two valves incloſing the ſeeds.

BIVENTER, in anatomy, called alſo digaſtric, or two-bellied, a muſcle of the lower jaw, that has its origin in the inciſure under the maſtoide proceſs. The tendon of it often paſſes the ſtylo-hyoidæus muſcle, and the membranaceous ring affixed to the os hyoides, in the manner of a pulley, and is then inſerted by a ſynchondroſis into the internal part of the chin. The mouth is opened by means of this trochlea, in a moſt wonderful and elegant manner.

BIXA, in botany, a genus of the *polyandria-monogynia* claſs of plants. The flower is double, the exterior one conſiſting of five oblong, equal, and thick petals, and the interior of five petals alſo, like thoſe of the other, but thinner; the fruit is an ovato-cordated compreſſed capſule, beſet with hairs, formed of two valves, opening at the angles, with only one cell with an interior bivalve membrane; the ſeeds are numerous, turbinated, and truncated at the umbilicus.

BIZARRO, in the italian muſic, denotes a fanciful kind of compoſition, ſometimes faſt, ſlow, ſoft, ſtrong, *&c.* according to the fancy of the compoſer.

BIZOCHI, or BISOCHI, in church-hiſtory, certain heretical monks, ſaid to have aſſumed the religious habit contrary to the canons, rejected the ſacraments, and maintained other errors.

BLACK, a well-known colour, ſuppoſed to be owing to the abſence of light; all the rays thereof being imbibed by the black bodies. See COLOUR and LIGHT.

Black

Black bodies are not only warmer, but more inflammable than others, as is proved by various experiments, for which the curious may conſult Boyle, 'S Graveſande, and other philoſophers who have treated of this ſubject.

BLACK, among dyers, one of the five ſimple and mother colours, uſed in dying. It is made differently, according to the ſeveral qualities of the ſtuffs that are to be dyed. For ſtuffs of a high price, as woollen cloth, an ell and a half or an ell and a quarter wide, broad and narrow ratteens, fine woollen druggets, &c. they muſt uſe a black made of the beſt woad and indigo, inclining to a bluiſh brown. The goodneſs of the compoſition conſiſts in there being not above ſix pounds of indigo ready prepared to each ball of woad, when the latter, being in the tub, begins to caſt its blue flower; and in not being heated for uſe above twice; after which it muſt be boiled with alum, tartar, or aſhes of lees of wine, then maddered with common madder, and laſtly the black muſt be given with gall nuts of Aleppo, copperas, and ſumach. As for more indifferent ſtuffs, ſuch as ſmall ratteens and ſhalloons, as they cannot pay for the expence of maddering, it is ſufficient that they be well boiled with woad, and afterwards blacked with gall and copperas. There is likewiſe the jeſuit's black, which is made with the ſame ingredients as the good black, but without having firſt dyed the ſtuff blue.

German BLACK, called by ſome frankfort black, is made with the lees of wine, burnt, waſhed afterwards in water, then ground in mills made for that purpoſe, with ivory, bones, or peach-ſtones, alſo burnt. It comes from Frankfort, Mentz, and Straſbourg, either in lumps or powder, and muſt be choſen moiſt, without having been wetted, of a fine ſhining black, ſoft, friable, light, and with as few ſhining grains as poſſible.

Ivory-BLACK, otherwiſe called velvet-black, is burnt ivory, which becoming quite black, and being reduced to thin plates, is ground in water, and made into troches, to be uſed by painters, and by jewellers, who ſet precious ſtones, to blacken the ground of the collets, and give the diamonds a-teint or foil. In order to be good, it ought to be tender, friable, and thoroughly ground.

Bone-BLACK is made with the bones of oxen, cows, &c. and is uſed in painting; but is not ſo much eſteemed as ivory-black.

Hart's BLACK, that which remains in the retort after the ſpirits, volatile ſalt, and oil have been extracted from hart's-horn. It anſwers the purpoſes of painters almoſt as well as ivory-black.

Spaniſh BLACK is nothing but burnt cork: it is uſed in ſeveral works. It ſhould be light, and have as few grains of ſand mixed with it as poſſible.

Lamp-BLACK, or *Lam*-BLACK, the ſooty ſmoke of roſin. There is ſome in powder and ſome in lumps, and is moſtly brought from Sweden and Norway, and pays duty 1l. 10s. $4\frac{80}{100}$d. the hundred weight. It is uſed on various occaſions, particularly for making the printers ink, for which purpoſe it is mixed with oil of walnuts, or linſeed, and turpentine, all boiled together.

Earth-BLACK, a ſort of coals found in the ground, which the painters and limners uſe to paint in freſco, after it has been well ground.

There is alſo a black made with gall-nuts, copperas, or vitriol, ſuch as common ink. And a black made with ſilver and lead, which ſerves to fill up the cavities of engraved things.

Currier's BLACK, a black made with gall-nuts, ſour beer, and old iron, termed the firſt black. The ſecond black, which gives the gloſs of the leather, is compoſed of gall-nuts, copperas, and gum arabic.

BLACK, in heraldry, is called ſable. See the article SABLE.

BLACK, in the manege. Horſes entirely black, are accounted dull; but thoſe with a white foot, or white ſpot in their forehead, are not without ſprightlineſs.

BLACK BANK, in geography, a town of Ireland, about ſeven miles ſouth of Armagh, in 6° 50′ weſt long. and 54° 12′ north latitude.

BLACK-BIRD, a ſpecies of *turdus*, called merula. See TURDUS and MERULA.

BLACK-BOOK *of the exchequer*. See the article EXCHEQUER.

BLACK-BOURN, a market town of Lancaſhire, about nine miles eaſt of Preſton, in 2° 20′ weſt long. and 53° 40′ north lat.

BLACK FOREST, a part of Swabia, divided from Switzerland, by the river Rhine.

BLACK-LEAD. See PLUMBAGO.

BLACK-MAIL, *a link of mail*, or ſmall pieces of metal or money. In the counties of Northumberland, Cumberland, and Weſtmoreland, it was formerly taken for a certain rent of money, corn, cattle, or other conſideration, paid by poor people near the borders, to perſons of note and

power, allied with ſome moſs-troopers, or known robbers, in order to protect them from pillage.

BLACK-ROD. See the article ROD.

BLACK-SEA, the ſame with the Euxine-ſea, lying north of Natolia, between 29° and 44° eaſt longitude, and 42° and 46° north latitude.

BLACK-WATER, the name of two rivers in Ireland, one of which runs through the counties of Cork and Waterford, and falls in Youghal bay; and the other, after watering the county of Armagh, falls into Lough Neagh.

BLACKS, in phyſiology. See NEGROES.

BLADDER, a thin membranous ſubſtance, found in ſeveral parts of an animal, ſerving as a receptacle of ſome juice, or of ſome liquid excrement, as the urinary bladder, gall bladder, &c.

Bladder, by way of eminence, or urinary bladder, is a membranaceous hollow body, of the figure of a pear, ſituated in the pelvis, and deſtined to collect, and at a proper time, to expel the urine. Its ſize is ſuch, that it will conveniently hold about a pint in adults; but it is capable of diſtenſion ſo as to hold much more. It is connected, in the human body, in a ſingular manner, by the peritonæum to the os pubis, otherwiſe than in other animals: it is alſo connected with the parts of generation by the urethra; with the navel by the urachus and umbilical arteries; and finally, in men, with the inteſtinum rectum; and in women, with the vagina. It is divided into three parts, the body, the neck, and the fundus or bottom. The coats of the bladder are much thinner in the body and the fundus than they are at the neck. Its blood-veſſels come from the hypogaſtric, the umbilical, and the hæmorrhoidal veſſels in men; and in women, from the ſpermatics alſo. Its nerves are from the intercoſtals, and principally from thoſe of the os ſacrum.

Its ſtructure is membranaceous, and conſiſts of three coats: the firſt is called the common membrane; this is continuous with the peritonæum, and ſurrounds only the bottom of the bladder. The ſecond coat is muſcular, and is compoſed of ſeveral fibres, running in various directions, but principally longitudinal and tranſverſe. The third, or inner coat, is nervous, and is covered with a peculiar fluid of a mucous nature, which is ſecreted in glands ſituated in this coat, and principally in that part which is near the neck of the bladder. The ſphincter of the bladder is compoſed of a ſeries of tranſverſe fibres, running croſs-ways under the ſtrait fibres of the neck of the bladder, in form of a circle, and ſerving to cloſe it, to prevent the involuntary diſcharge of the urine. The bladder has three foramina; two where the ureters enter in, at which the urine is thrown into the bladder; and one, much larger than theſe, in the neck, for the diſcharge of the urine into the urethra.

The diſeaſes of the bladder are the ſtone, inflammations, ulcers, &c. See the article STONE, &c.

For the other bladders of the body, ſee the article VESICULA.

In commerce, bladders pay duty of importation $\frac{95\frac{1}{4}}{100}$ d. the dozen.

Air-BLADDER, in phyſiology. See the article AIR-BLADDER.

BLADDER-NUT. See STAPHYLÆA.

African BLADDER-NUT. See ROYENA.

Laurel-leaved BLADDER-NUT. See the article DODONÆA.

BLADDER-PUCERON. See PUCERON.

BLADE, in botany, a name ſometimes given to the flower-petals.

BLADE, in commerce, a ſlender piece of metal, deſigned for cutting: thus we meet with ſword-blade, blade of a chiſſel, blade of a ſaw, &c.

BLÆRIA, in botany, a genus of the tetrandria-monogynia claſs of plants, the flower of which is monopetalous and campanulated: the tube is cylindric, of the length of the cup, and pervious: the limb is ſmall, and divided into four oval reflex ſegments: the fruit is an oblong quadrangular capſule, with four cells, containing ſeveral roundiſh ſeeds.

BLAIN, among farriers, a diſtemper incident to beaſts, being a certain bladder growing on the root of the tongue, againſt the wind-pipe, which ſwells to ſuch a pitch, as to ſtop the breath. It comes by great chafing and heating of the ſtomach, and is perceived by the beaſt's gaping and holding out his tongue, and foaming at the mouth; to cure it, caſt the beaſt, take forth his tongue, and then ſlitting the bladder, waſh it gently with vinegar and a little ſalt.

BLAIR *of Athol*, a ſmall town of Athol, in Scotland, ſituated about twenty-eight miles north of Perth.

BLAMONT, a town of Lorrain, about twenty-

twenty-eight miles south-east of Nancy: east lon. 6° 45′, and north lat. 48° 38′.

BLANC, or BLANK. See BLANK.

BLANCH FERM, according to Blount, is a white farm, where the rent was paid in silver, and not in cattle. The crown-rents were often reserved *in libris albis*, or blanch fermes, in which case the buyer or farmer was holden *dealbare firmam*, *i. e.* his money, worse than the standard, was to be melted down in the exchequer, and reduced to the fitness of standard; or instead of that he paid to the king 12 d. in the pound, by way of addition.

BLANCHING, in a general sense, denotes the art of bleaching or whitening.

BLANCHING of copper is done various ways, so as to make it resemble silver. If it be done for sale, it is felony by 8 and 9 William III. ch. xxvi.

BLANCHING, in coinage, the operation performed on the planchets or pieces of silver, to give them the requisite lustre and brightness. They also blanch pieces of plate, when they would have them continue white, or have only some parts of them burnished.

Blanching, as it is now practised, is performed by heating the pieces on a kind of peel with a wood-fire, in the manner of a reverberatory; so that the flame passes over the peel. The pieces being sufficiently heated and cooled again, are put successively to boil in two pans, which are of copper: in these they put water, common salt, and tartar of montpelier. When they have been well drained of this water in a copper sieve, they throw sand and fresh water over them; and when dry, they are well rubbed with towels.

BLANCHING, among gardeners, an operation whereby certain sallets, roots, &c. are rendered whiter than they would otherwise be.

It is this: after pruning of the tops and roots of the plants to be blanched, they plant them in trenches about ten inches wide, and as many deep, more or less, as is judged necessary; as they grow up, care is taken to cover them with earth, within four or five inches of their tops: this is repeated, from time to time, for five or six weeks, in which time they will be fit for use, and of a whitish colour, where covered by the earth.

BLANCHING also denotes the operation of covering iron plates with a thin coat or crust of tin. See the article LATTEN.

BLANCO, or *Cape*-BLANCO, a promontory of Peru, in south America: west longitude 81°, and south latitude 3° 45′.

BLANCO is also the name of one of the Antille-islands, on the coast of Terra Firma: west longitude 64°, and north latitude 12°.

Cape-BLANCO is also a promontory of Africa, in 18° west lon. and 20° north lat.

BLANDFORD, a market-town of Dorsetshire, ten miles north of Pool: west lon. 2° 20′, and north-latitude 50° 50′.

BLANES, a port-town of Catalonia, in Spain; east longitude 2° 40′, and north latitude 41° 30′.

BLANK, or BLANC, properly signifies white. See the article WHITE.

BLANK, in commerce, a void or unwritten place which merchants sometimes leave in their day-books or journals. It is also a piece of paper at the bottom of which a person has signed his name, the rest being void. These are commonly intrusted into the hands of arbiters, to be filled up as they shall think proper, to terminate any dispute or law-suit.

BLANK-BAR, in law, the same with common bar. See the article BAR.

BLANK-TICKETS, in lotteries, those drawn without any prize.

BLANK-VERSE, in the modern poetry, that composed of a certain number of syllables, without the assistance of rhyme. See the articles VERSE and RHYME.

Point BLANK, See POINT-BLANK.

BLANKENBURG, a town of dutch Flanders, eight miles north-east of Ostend: east lon. 3°, north lat. 51° 20′.

BLANKENBURG is also the name of a town in lower Saxony, about forty-five miles south-east of Wolfenbuttle; east lon. 11° 15′, and north latitude 51° 50′.

BLANKET, a coverlet for a bed. A stuff commonly made of white wool, and wrought in a loom like cloth; with this difference, that they are crossed like serges.

When they come from the loom, they are sent to the fuller; and after they have been fulled and well cleaned, they are napped with a fuller's thistle.

There are also blankets made with the hair of several animals, as that of goats, dogs, and others.

French blankets, called parish mantles, pay duty 12 s. 11 d. each, if coloured and the manufacture of France; otherwise only 5 s. $1\frac{60}{100}$ d. If uncoloured, and the manufacture of France, they pay each 9 s. 8 $\frac{2}{100}$ d. otherwise only 3 s. $10\frac{20}{100}$ d. Blankets imported into France, pay a duty

duty of importation according to their fineneſs; namely, thoſe of fine wool, ſix livres *per* piece; thoſe of coarſe and middling wool, three livres. None can be imported but by the way of Calais and St. Vallery.

BLANQUILLE, in commerce, a ſmall ſilver coin current in the kingdom of Morocco, and all that part of the coaſt of Barbary: it is worth about three half-pence of our money.

BLARE, in commerce, a ſmall copper coin of Bern, nearly of the ſame value with the ratz.

BLAREGNIES, a town of the auſtrian Netherlands, about ſeven miles ſouth of Mons; eaſt longitude 3° 55′, and north latitude 50° 30′.

BLASIA, in botany, a genus of plants belonging to the *cryptogamia algarum* claſs. The male flower is monophyllous, ovated at the baſe, of a cylindric figure at the middle, and truncated at the apex. The female flower is ſcarce viſible. The pericarpium contains a few roundiſh ſeeds.

BLASPHEMY, an indignity or injury offered to the Almighty, by denying what is his due, and of right belonging to him; or by attributing to the creature that which is due only to the creator.

The primitive church diſtinguiſhed blaſphemy into three ſorts. 1. The blaſpheming of apoſtates, whom the heathen proſecutors obliged not only to deny, but to curſe Chriſt. Theſe blaſphemers were puniſhed with the higheſt degree of eccleſiaſtical cenſure. 2. The blaſphemy of heretics, and other prophane chriſtians. In this ſenſe they included not only thoſe who maintained impious doctrines, but thoſe who uttered prophane and blaſphemous words, derogatory to the majeſty and honour of God. The ſame puniſhment that was inflicted upon heretics and ſacrilegious perſons, was conſequently the lot of this ſort of blaſphemers. 3. The blaſphemy againſt the Holy Ghoſt, concerning which the opinions of the antients varied. Some apply it to the ſin of lapſing into idolatry and apoſtacy, in denying Chriſt in time of perſecution. Others made it conſiſt in denying Chriſt to be God: others, in denying the divinity of the Holy Ghoſt: and others place it in a perverſe and malicious aſcribing the operations of the holy ſpirit, to the power of the devil; and that againſt expreſs knowledge and conviction of conſcience.

Blaſphemy, among the Jews, was puniſhed by ſtoning the offender to death. With us, it is puniſhable at common law, by fine and pillory. And by a ſtatute of William III. if any perſon ſhall, by writing or ſpeaking, deny any of the perſons in the trinity, he ſhall be incapable of any office; and for the ſecond offence, be diſabled to ſue in any actions, to be an executor, *&c.*

BLAST, in a general ſenſe, denotes any violent exploſion of air, whether occaſioned by gun-powder, or by the action of a pair of bellows.

BLASTS, among miners, the ſame with damps. See the article DAMPS.

BLAST, or BLIGHT, in huſbandry. See the article BLIGHT.

BLASTING, a term uſed by miners for the tearing up rocks, which lie in their way, by the force of gun-powder.

In order to do this, a long hole is made in the rock, which being charged with gun-powder, they fill it up; leaving only a touch-hole, with a match to fire the charge.

BLATTA, the MILL-BEETLE, in the hiſtory of inſects, is a genus of inſects of the ſeries of the tetraptera, or thoſe which have four wings, and the order of the coleoptera: the antennæ are ſetaceous; there are two ſhort horns above the tail; the exterior wings are membranaceous; and the inſect is of the ſize of the common cricket; its colour is a deep ferrugineous brown, approaching to black.

BLAVET, or PORT-LEWIS, a port-town of Britanny, in France, ſituated at the mouth of the river Blavet; weſt longitude 3°, and north latitude 47° 40′.

BLAWBUREN, a town of Swabia, in Germany, about eleven miles eaſt of Ulm; eaſt longitude 9° 45′, and north latitude 48° 24′.

BLAYE, a fortreſs of Guienne, in France, ſituated on the river Garonne, about twenty-one miles north of Bourdeaux; weſt long. 45′, and north lat. 45° 7′.

The intention of it is, to hinder any ſhip from going to Bourdeaux without permiſſion.

BLAZE, a white ſpot in a horſe's face.

BLAZING-STAR, the ſame with comet. See the article COMET.

BLAZONING, or BLAZONRY, in heraldry, the art of decyphering the arms of noble families.

The word originally ſignified the blowing or winding of a horn, and was introduced into heraldry as a term denoting the deſcription of things borne in arms, with

with their proper ſignifications and intendments, from an antient cuſtom the heralds, who were judges, had of winding an horn at juſts and tournaments, when they explained and recorded the atchievements of knights.

In blazoning a coat of arms, you muſt always begin with the field, and next proceed to the charge; and if there be many things borne in the field, you muſt firſt name that which is immediately lying upon the field. Your expreſſions muſt be very ſhort and expreſſive, without any expletives, needleſs repetitions, or particles. Such terms for the colours muſt be uſed, as are agreeable to the ſtation and quality of the bearer. All perſons beneath the degree of a noble, muſt have their coats blazoned by colours and metals; noblemen by precious ſtones, and kings and princes by planets.

BLEA, in the anatomy of plants, the inner rind or bark. It may be conſidered as an aſſemblage of ſtrait fibres ranged vertically and parallel to one another.

While the blea remains any thing ſoft, and retains ſomewhat of the nature of bark, it may maintain a feeble vegetation; but when it is grown abſolutely hard and woody, it can no longer contribute thereto.

BLEACHING, the art or method of whitening linens, ſtuffs, ſilks, hair, &c.

BLEACHING *of ſilk*. The ſilk being raw, is put into a bag of fine linen, and thrown into a veſſel of boiling river-water, in which had been diſſolved good Genoa or Toulon ſoap. After boiling for ſome hours, it is taken out to beat, and then is waſhed in cold water, wrung ſlightly, and put a ſecond time into the boiling veſſel, filled with cold water, mixed with ſoap and a little indigo, which gives it a bluiſh caſt. When it is taken out of this ſecond water, they wring it hard, untwiſt it, and ſeparate the threads; then they ſuſpend it in the air in a kind of ſtove, where they burn ſulphur, the vapour of which mineral gives the laſt degree of whiteneſs to the ſilk.

BLEACHING *of woollen ſtuffs* is performed three different ways. 1. With water and ſoap. 2. With the vapour of ſulphur. And, 3. With chalk, indigo, and the vapour of ſulphur.

BLEACHING *of coarſe linens*. After they are taken from the loom, they are laid in wooden frames full of cold water, where they are beaten with wooden hammers, and purged from the filth; then they are ſpread upon the ground to receive the dew for eight days; after which they are put into wooden tubs, with hot lye poured over them. Having been thus lixiviated, they are again purged in a mill, and the former proceſs repeated, till they have acquired their juſt degree of whiteneſs.

BLEACHING *fine linens*. After they are taken from the loom, they are put to ſoak in clear water, and when they have been well cleanſed, are thrown into a bucking-tub filled with cold lye, made of wood-aſhes and water. When they are taken out of the lye, they are waſhed in fair water, ſpread in a meadow, and frequently watered from little canals, by means of ſcoops or hollow ſhovels. After lying a certain time on the ground, they are paſſed through a freſh lye poured on hot, and made differently, according to the condition of the linens. Being taken out of this ſecond lye, and every thing repeated as before, they are paſſed through a ſoft lye, rubbed with black ſoap, which finiſhes the whitening of the ſalvages; and the ſoap being waſhed off, they are put to ſoak in cow's milk without the cream. This perfects their bleaching, gives them the proper ſoftneſs, and makes them caſt a little nap. Being taken out of the milk, they are waſhed in water for the laſt time. After all this proceſs, the linen gets its firſt blue by paſſing thro' a water, in which a little ſtarch, ſmalt, and dutch lapis have been ſteeped. In the laſt place, the proper ſtiffneſs and luſtre is given with ſtarch, ſmalt, and other gums, the quantity and quality of which may be adjuſted according to the occaſion.

BLEACHING *of hair* is done by waſhing it as linen, in a ſuitable lixivious water, and afterwards ſpreading it upon the graſs. Hair bordering upon the yellow, may likewiſe be bleached of a white ſilver colour, with biſmuth.

BLEAK, the engliſh name of the fiſh called by the generality of authors alburnus and albula, which Artedi makes a ſpecies of cyprinus, with twenty four rays in the pinna ani. See CYPRINUS.

BLECHINGLY, a borough-town of Surry, about twenty miles ſouth of London: weſt longitude 20′, and north latitude 51° 20′.

BLECHUM, in botany, a genus of plants of the claſs of the cryptogamia filices, the fructi-

fructifications are diſpoſed in parallel lines on the ſides of the leaves.

BLEEDING, or PHLEBOTOMY, in ſurgery. See the article PHLEBOTOMY.

Bleeding is ſaid to be highly neceſſary in the phrenitis, ophthalmia, quinzy, rheumatiſm, cough, conſumption, hectic fits, and, in general, in all inflammatory caſes. Some even make no ſcruple of bleeding a conſumptive patient every other day for ſeveral weeks together.

BLEEDING at the noſe, a particular kind of hæmorrhage. See HÆMORRHAGE.

BLEEDING is alſo uſed for the drawing out the ſap of plants, otherwiſe called tapping. See the article TAPPING.

BLEKING, the moſt ſouth-eaſterly province of Sweden, having the Baltic on the ſouth, Smaland on the north, and the province of Schonen on the weſt.

BLEMISH, a term in hunting, when the hounds or beagles finding where the chaſe has been, make a proffer to enter, but return.

BLEMYES, or BLEMMYES, a fabulous people of Ethiopia, ſaid to have had no heads; their eyes, mouth, &c. being ſituated in their breaſts.

BLEND, or BLENDE, a mineral ſubſtance reſembling lead-ore, but containing very little of that metal.

BLEND-WATER, called alſo morehough, a diſtemper incident to black cattle, comes either from the blood, from the yellows, or from the change of ground.

In order to cure it, take bole armoniac, and as much charcoal duſt as will fill an egg-ſhell, a good quantity of the inner bark of an oak, dried and pounded together to a powder, and give it to the beaſt in a quart of new milk and a pint of earning.

BLENHEIM, a village of Swabia in Germany, ſituated on the weſt ſide of the Danube, three miles north-eaſt of Hockſtet, and twenty-ſeven miles north-eaſt of Ulm; eaſt longitude 10° 25′, and north latitude 48° 40′.

BLENNIUS, in ichthyology, a genus of acanthopterygious fiſhes, the characters of which are, that there are ſix bones in the branchioſtege membrane; that the fore part of the head is very ſlanting; and that the belly fins have only two bones.

To this genus belong the blennius, properly ſo called, the gattorugine, alauda, galerita, gunellus, galea, muſtela, and pentadactylus.

BLENNUS is particularly uſed for that ſpecies of blennius, which has a furrow between the eyes, with a beautiful ſpot in its back fin; from whence it has got the name of the butter-fly fiſh. See plate XXVIII. fig. 6.

BLEYME, an inflammation ariſing from bruiſed blood between the horſe's ſole and the bone of the foot, towards the heel: of theſe there are three ſorts, the firſt being bred in ſpoiled wrinkled feet, with narrow heels, are uſually ſeated in the inward or weakeſt quarter. In this caſe the hoof muſt be pared, and the matter let out; then let oil *de merveille* be poured in, and the hoof be charged with a remolade of ſoot and turpentine.

The ſecond ſort, beſides the uſual ſymptoms of the firſt, infects the griſtle, and muſt be extirpated, as in the cure of a quitter bone, giving the horſe, every day, moiſtened bran, with two ounces of liver of antimony, to divert the courſe of the humours, and purify the blood.

The third ſort of bleymes, is occaſioned by ſmall ſtones and gravel between the ſhoe and the ſole. In this caſe the foot muſt be pared, and the matter, if any, let out: if there be no matter, then the bruiſed ſole muſt be taken out; but if there be matter, the ſore muſt be dreſſed like the prick of a nail.

BLIGHT, in huſbandry, a diſeaſe incident to plants, which affects them variouſly, the whole plant ſometimes periſhing by it, and ſometimes only the leaves and bloſſoms, which will be ſcorched and ſhrivelled up, the reſt remaining green and flouriſhing.

Some have ſuppoſed that blights are uſually produced by an eaſterly wind, which brings vaſt quantities of inſects eggs along with it from ſome diſtant place, that being lodged upon the ſurface of the leaves and flowers of fruit trees, cauſe them to ſhrivel up and periſh.

To cure this diſtemper they adviſe the burning of wet litter on the windward ſide of the plants, that the ſmoke thereof may be carried to them by the wind, which they ſuppoſe will ſtifle and deſtroy the inſects, and thereby cure the diſtemper.

Others direct the uſe of tobacco-duſt, or to waſh the trees with water wherein tobacco ſtalks have been infuſed for twelve hours; which they ſay will deſtroy the inſects, and recover the plants.

Pepper duſt ſcattered over the bloſſoms of fruit trees, &c. has been recommended as very

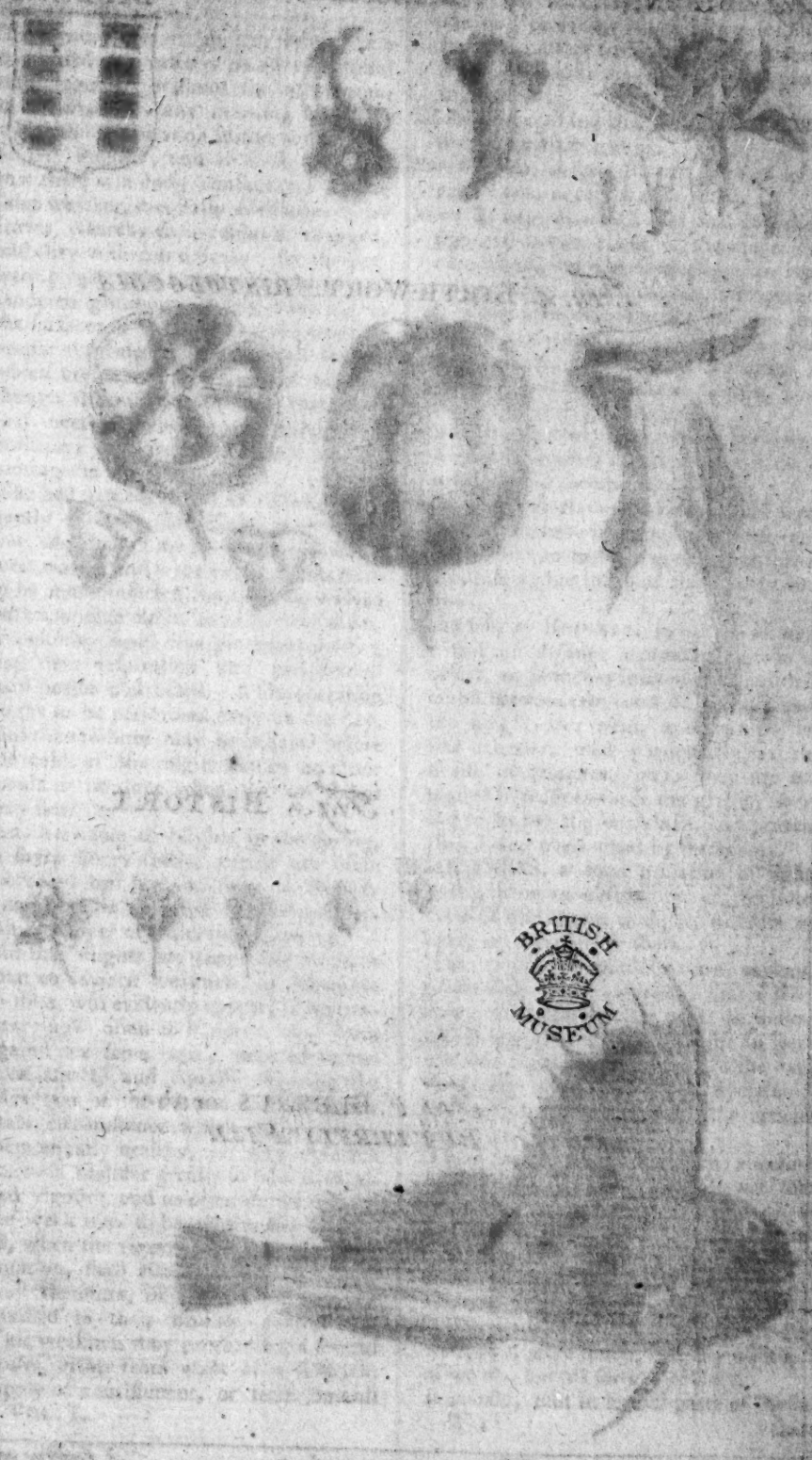

BRITISH MUSEUM

Fig. 1. BIDENS.



Fig. 2. BIGNONIA.



Fig. 3. BILLETS.



Fig. 4. BIRTH-WORT, *ARISTOLOCHIA.*



Fig. 5. BISTORT.



Fig. 6. BLENNUS or the *BUTTERFLY FISH.*



J. Jefferys sculp.

very useful in this case; and there are some that advise the pulling off the leaves that are distempered.

The true causes of blights, seem to be a continued dry easterly wind for several days together, without the intervention of showers, or any morning dew, by which the perspiration in the tender blossom is stopped; and if it so happens, that there is a long continuance of the same weather, it equally affects the tender leaves, whereby their colour is changed, and they wither and decay: for the perspiring matter is hereby thickened, and rendered glutinous, closely adhering to the surfaces of the leaves, and becoming proper nutriment to those small insects, which are not the first cause of blights, though it must be allowed, that when they meet with such proper food, they multiply, and are instrumental in promoting the distemper.

The best remedy for this distemper, is gently to wash, and sprinkle over the tree, *&c.* from time to time, with common water; and if the young shoots seem to be much infected, let them be washed with a woolen cloth, so as to clear them, if possible, from this glutinous matter, that their respiration and perspiration may not be obstructed. This operation ought to be performed early in the day, that the moisture may be exhaled before the cold of the night comes on: nor should it be done when the sun shines very hot.

Another cause of blights in the spring, is sharp hoary frosts, which are often succeeded by hot sun-shine in the day time: this is the most sudden and certain destroyer of fruits that is known.

But that blights are frequently no more than an inward weakness, or distemper in trees, will evidently appear, if we consider how often it happens, that trees against the same wall, exposed to the same aspect, and equally enjoying the advantage of the sun and air, with every other circumstance which might render them equally healthy, yet very often are observed to differ greatly in their strength and vigour; and as often do we observe the weak trees to be continually blighted, when the vigorous ones, in the same situation, shall escape very well; which must therefore, in a great measure, be ascribed to their healthy constitution. This weakness may proceed from several causes, either from want of a sufficient supply of nourishment, or from some ill quality in the soil, from some bad quality in the stock, or inbred distemper of the bud or cyon, which it has imbibed from its mother tree, or it may proceed from some mismanagement in the pruning, *&c.*

BLIND, something that wants sight. See the article BLINDNESS.

Pore-BLIND, or *pur*-BLIND, is said of a person who is very short sighted.

Moon-BLIND, denotes horses that lose their sight at certain times of the moon; to cure which, take half an ounce of lapis calaminaris; heat it red hot, and quench it in a quarter of a pint of plantain-water or white wine: to this add half a dram of aloes, and a spoonful of camphor, in powder; and letting them dissolve, drop part of it into the horse's eye.

BLIND is also used, figuratively, for things without apertures: thus we say, a blind wall, a blind alembic, *&c.*

BLIND, among traders, a kind of false light which they have in their warehouses and shops, to prevent too great a light from diminishing the lustre of their linens and stuffs.

BLINDS, or BLINDES, in the art of war, a sort of defence commonly made of oziers, or branches interwoven, and laid across between two rows of stakes, about the height of a man, and four or five feet asunder, used particularly at the heads of trenches, when they are extended in front towards the glacis; serving to shelter the workmen, and prevent their being overlooked by the enemy.

BLINDNESS, a total privation of sight, arising from an obstruction of the functions of the organs of sight, or from an intire deprivation of them.

The causes of blindness are various, proceeding from cataracts, gutta serena's, *&c.* There are also periodical blindness, as a defect of sight in some towards night, in others only in the day; the former of which is termed nyctalopia, the latter hemeralopia. See the articles NYCTALOPIA, *&c.*

There are many instances of the amazing sagacity of blind people. We are told of a sculptor, who becoming blind at twenty years of age, made a perfect marble statute of Cosmo II. de Medicis, and another of clay, of Urban VIII. We are also told that there was a blind sculptor in Denmark, who distinguished perfectly well, by a mere touch, not only all kinds of woods, but all sorts of colours.

It is said, that in several parts of Persia,

there are found vaſt numbers of blind people of all ages, ſexes, and conditions, by reaſon of a ſpecies of little flies, which prick the eyes and lips, and enter the noſtrils, carrying certain blindneſs with them, when they light on the eyes.

BLINDNESS, in farriery. When a horſe becomes blind, it may be thus diſcerned: his walk or ſtep is always uncertain and unequal, ſo that he does not ſet down his feet boldly, when led in one's hand: but if the ſame horſe be mounted by an expert horſeman, and that he be of himſelf a beaſt of metal, then the fear of the ſpurs will make him go reſolutely and freely; ſo that his blindneſs can hardly be perceived.

Another mark by which a horſe may be known to have loſt his ſight is, that when he hears any body enter the ſtable, he will prick up his ears, and move them backwards and forwards. The reaſon is, that a vigorous horſe, having loſt his ſight, miſtruſts every thing, and is continually in alarm, at the leaſt noiſe he hears.

BLISTER, in medicine, a thin bladder, containing a watery humour, whether occaſioned by burns, and the like accidents, or by veſicatories laid on different parts of the body for that purpoſe. This word is alſo uſed improperly for the medicine by whoſe operation the veſicle or bliſter is raiſed, which is more properly called a veſicatory or bliſtering plaſter. See the articles BURN, EPISPASTIC, and VESICATORY.

Cantharides, or ſpaniſh flies, applied in the form of a plaſter, are chiefly uſed with this intention. See CANTHARIS.

BLITE, *blitum*, in botany, a genus of the *monandria-digynia* claſs of plants. It has no flower petals: the fruit is a berry-like capſule, of an oval figure, and ſomewhat compreſſed; the ſeed is ſingle, of a globular figure, compreſſed, and nearly of the ſize of the capſule.

Blite, on account of its cooling and emollient qualities, is recommended in dyſenteries and ſpitting of blood.

BLITH, a market-town in Nottinghamſhire, about eighteen miles north-weſt of Newark: weſt longitude 1°, and north latitude 53° 25'.

BLITUM, *blite*, in botany. See BLITE.

BLOATING, among phyſicians, the ſame with emphyſema. See EMPHYSEMA.

BLOCK, a large maſs of wood, ſerving to work or cut things on.

BLOCKS, on ſhip-board, is the uſual name for what we call pulleys at land. They are thick pieces of wood, ſome with three, four, or five ſhivers in them, through which all the running ropes run. Blocks, whether ſingle or double, are diſtinguiſhed and called by the names of the ropes they carry, and the uſes they ſerve for.

Double blocks are uſed when there is occaſion for much ſtrength, becauſe they will purchaſe with more eaſe than ſingle blocks, though much ſlower.

Block and block is a phraſe ſignifying that two blocks meet, in haling any tackle, or halliard, having ſuch blocks belonging to them.

Fiſh block is hung in a notch at the end of the davit. It ſerves to hale up the flooks of the anchor at the ſhip's prow.

Snatch block is a great block with a ſhiver in it, and a notch cut thro' one of its cheeks, for the more ready receiving of any rope; as by this notch the middle part of a rope may be reeved into the block, without paſſing it endwiſe. It is commonly faſtened with a ſtrap about the main-maſt, cloſe to the upper deck, and is chiefly uſed for the fall of the winding tackle, which is reeved into this block, and then brought to the capſtan.

BLOCK, among bowlers, denotes the ſmall bowl uſed as a mark.

BLOCK, in falconry, the perch upon which they place the hawk. It ought to be covered with cloth.

BLOCK *of marble*, or ſtone, a maſs juſt as taken out of the quarry.

BLOCK-*Battery*, in the military art, denotes a wooden battery on four wheels, moveable from place to place, whereby to fire *en barbe*, or over the parapet; ſometimes alſo uſed in galleries and caſements, where room is wanted.

BLOCK *Houſe*, a kind of wooden fort or battery, either mounted on rollers, or on a veſſel, and ſerving either on the water, or in counterſcarps and counter-approaches. The name is ſometimes alſo given to a brick or ſtone fort built on a bridge, or the brink of a river, ſerving not only for its defence, but for the command of the river both above and below; ſuch was that noted block-houſe antiently on the bridge of Dreſden, ſince demoliſhed on enlarging the bridge.

BLOCKADE, in the art of war, the blocking up a place, by poſting troops at all the avenues leading to it, to keep ſupplies of men and proviſions from getting into

into it; and by these means proposing to starve it out, without making any regular attacks.

To raise a blockade, is to force the troops that keep the place blocked up, from their posts.

BLOIS, a beautiful city of Orleanois, about thirty miles south-west of Orleans; situated on the north shore of the river Loire, in one of the finest countries in France: east long. 1° 20′, and north lat 47° 35′.

BLOMARY, or BLOOMARY, in metallurgy, the first forge through which iron passes, after it is melted out of the ore.

BLONIC, a town of Poland, about twenty miles west of Warsaw: east longitude 20° 30′, and north latitude 52°.

BLOOD, *sanguis*, a red liquor circulating through the arteries, veins, and other vessels of animal bodies; and serving for the support of life, and nourishment of all their parts.

Origin of the BLOOD. The blood is the great source from which all the other liquors of the body are derived. It is formed from chyle by various and successive degrees. A few hours after meals, the chyle is found conveyed into the blood, though not assimilated. Hence, when after a liberal meal blood is taken from the vein, besides the serum and the red part, there is a white, sweet, and chylous part found fluctuating in the blood. In a few hours the chyle, conveyed with the blood through the vessels, is separated from the blood by the fabric of the breasts, and affords milk, which is of a different nature both from blood and chyle; for in milk there begins to be formed that tendency to concretion which is already present in the serum of the blood, for it yields cheese. But this tendency to concretion is never found in the chyle. Hence we may artificially imitate the preparation of chyle in emulsions, but never the nature of milk.

When a sound woman for twelve hours totally abstains from meat and drink, her milk begins to be saline and yellowish. If she abstains still longer, nothing is found in the blood taken from her veins, but what (like the white of an egg) is by means of the fire concreted, which never happens in the chyle. See the articles CHYLE and CHYLIFICATION.

Hence we may conclude that the bodies of sound persons are the formers and producers of their own blood, in the same manner as any plant, by its peculiar fabric, prepares its sap from the juices of the fertile earth and the genial influences of the circumambient air.

But in the human body the formation of blood depends principally upon the efficacy of the circulation, by which the vessels act upon their contained fluids. Hence in the most robust persons the blood is reddest, or rather almost black, in consequence of its saturated red colour, and is concreted almost the very moment it is left in a state of rest. And in acute diseases, when the circulation is increased, all the parts are intensely red, and the serum of the blood is converted into a sciffile mass. But in weak persons in whom the efficacy of the circulation is far less, all the parts are pale and languid, whilst the blood is thin and hardly capable of concretion. But when in such persons, with due exercise and proper remedies, the circulation is augmented, the red colour and due cohesion of the blood return.

Analysis of the BLOOD. The most obvious composition of blood is of a thin watry liquor, called serum; and a thick reddish lump, called crassamentum. This last, viewed by the microscope, is seen to consist of red globules, of a certain determined magnitude, the same in different parts of the same animal, and even in different animals of whatever size; being equally big in an ox, a sheep, or rabit: and the plano-oval particles in the blood of fowls and fishes, corresponding to the globules of terrestrial animals, are the same in the greatest whales, as in an eel or a frog; the same in an eagle as in a sparrow. See the article SERUM.

These are easily perceived by any body; but the sharp-sighted Lewenhoek went farther. He discovered those globules to be made up of lesser ones, which were likewise composed of others still smaller; and so on to the fifth, sixth, *&c.* orders. Hence it appears, how little reason certain physiologists had to suppose these globules made up of viscid bullulæ, inclosing little spherules of air.

As to the fibres, *vide*, which many have described as essential parts of the blood, there are no vestiges of them to be found, at least in its natural state.

The antients did not pretend to determine the proportions of the constituent parts of the blood; but, from the experiments of modern chemists, they have been found to be nearly as in the following table, where the blood is reckoned unity, and supposed to consist of 4873 grains.

	N°. of grains.	proportion to the whole.
Water — —	4068 —	— $\frac{8}{10}$
Oil — —	333 —	— $\frac{1}{13}$
Salt — — —	190 —	— $\frac{1}{25}$
Earth — —	65 —	— $\frac{1}{73}$
Air — — —	171 —	— $\frac{1}{28}$

Thus we ſee how greatly the watery or phlegmatic part of the blood exceeds the other principles. However, it is proper to obſerve, that there is a remarkable difference between the blood as it circulates in the veſſels of animals, and when expoſed to the cold air: we know that all bodies whatſoever are condenſed by cold, and expanded again by heat; ſo that we may ſafely affirm the cold blood, or as it is commonly examined, to be ſpecifically heavier, than that circulating in veſſels of living animals.

Circulation of the BLOOD. See the article CIRCULATION *of the Blood.*

Velocity or *momentum of the circulating* BLOOD. See *Force of the* HEART.

Heat of the BLOOD. See the article HEAT.

Quantity of the BLOOD. Authors are not agreed in regard to the quantity of blood contained in the human body; ſome making it only 10 pounds, whilſt others make it to be 20, 60, or even 100 pounds: but then theſe laſt comprehend the juices of the lymphatic veſſels under the term blood. As to the quantity of current blood in a horſe, the ingenious Dr. Hales found it to be, at a low computation, 1105 cubic inches, or 42.2 pounds.

BLOOD, in medicine, claims the moſt attentive regard of phyſicians. An exceſs of its quantity produces a plethora, lethargy, &c. Fevers are the conſequence of its too rapid motion, and obſtructions of its viſcidity and languor.

The too great heat and viſcidity of the blood, are its prevailing diſorders in a country like this, where people live high, and drink hot inflammable liquors. Beſides temperance, and uſing water as beverage, the milder preparations of mercury, contribute greatly to cool and dilute the blood: ſuch are ethiops and cinnabar, if given in moderate doſes, ſo as not to affect the ſtomach, or excite a ſalivation.

Thickneſs of the blood is another diſtemperature, proceeding from a plethora, and diminution of its motion; from whence ariſe obſtructions, ſtagnations, hypochondriac and hyſteric affections, &c. The incubus, or night-mare, is alſo owing to the ſame cauſe.

Spitting of BLOOD is cured by copious bleeding every third day, to the fourth time. Gentle purging is likewiſe recommended; and, for appeaſing the commotion of the blood, ſpirit of vitriol, but more eſpecially the tincture of roſes made therewith. A milk diet is alſo preferable to any other; and after the cure is completed, it will be neceſſary, by way of prevention, to bleed once in ſix months for ſeveral years together.

For the ſtanching of BLOOD, ſee STYPTIC.

Tranſuſion of BLOOD. See the article TRANSFUSION.

BLOOD, in farriery, a diſtemper in the backs of cattle, which will make a beaſt go as if he drew his head aſide, or after him. In order to cure it, you ſhould ſlit the length of two points under his tail, and ſo let him bleed well; but if he bleeds too much, knit his tail next the body, and then bind ſalt and nettles bruiſed unto it.

Ebullition of the BLOOD, a diſeaſe in horſes which proceeds from want of exerciſe, and gives riſe to outward ſwellings, frequently miſtaken for the farcin.

BLOOD *running itch* happens to a horſe by the blood's being over heated by hard riding or other labour. As the blood gets between the ſkin and the fleſh, it makes a horſe rub and bite himſelf, and if neglected, will turn to a grievous mange.

BLOOD *of Chriſt*, the name of a military order inſtituted at Mantua in 1608. The number of knights was reſtricted to twenty, beſides the grand maſter. Their device was *Domine probaſti me*, or, *nihil, hoc, triſte, recepto.*

BLOOD *of Chriſt* is alſo the name of a congregation of nuns at Paris.

Dragon's BLOOD. See the article DRAGON.

Salamander's BLOOD. See SALAMANDER.

BLOOD-HOUND. See the article HOUND.

BLOOD-LETTING. See BLEEDING.

BLOOD-SHOTTEN. See OPHTHALMIA.

BLOOD-SPAVIN. See the article SPAVIN.

BLOOD-SNAKE. See HÆMORRHUS.

BLOOD-STONE. See HÆMATITES.

BLOOD-WITE, a mulct or fine for ſhedding of blood.

BLOOD-WORT, in botany. See the article SANGUINARIA.

BLOODY, ſomething belonging to, or abounding with blood.

BLOODY-FLUX. See the articles FLUX and DYSENTERY.

BLOODY-HAND, is when a treſpaſſer is apprehended

prehended in a foreſt with his hands or other parts bloody; which is a circumſtance of his having killed the deer, tho' he be not found chaſing or hunting them.

BLOODY-HEEL-COCK. See HEELER.

BLOODY-RAIN. See the article RAIN.

BLOODY URINE. See the article URINE.

BLOOM, a maſs of iron after having undergone the firſt hammering, called blomary. See the article BLOMARY.

BLOSSOM denotes the flowers of plants, but more eſpecially of fruit-trees. See the articles BOTANY and FLOWER.

BLOSSOM, or PEACH-COLOURED, in the manege, a term applied to a horſe that has his hair white, but intermixed all over with ſorrel and bay hairs. Such horſes are ſo inſenſible, and hard both in the mouth and the flanks, that they are ſcarce valued; beſides, they are apt to turn blind.

BLOTTING-BOOK, the ſame with waſte-book. See the article BOOK.

BLOTTING-PAPER. See PAPER.

BLOW, in law, any kind of ſtroke, whether given with the hand or a weapon. See the article BATTERY.

BLOW, in medicine. See the articles WOUND and CONTUSION.

BLOW-PIPE, or BLOWING-PIPE, a hollow tube, uſed by ſeveral artificers; as enamellers, glaſs-makers, &c.

BLOWING, in a general ſenſe, denotes an agitation of the air, whether performed with a pair of bellows, the mouth, a tube, or the like.

BLOWING *of glaſs*, one of the methods of forming the divers kinds of works, in the glaſs manufacture.

It is performed by dipping the point of an iron blowing-pipe in the melted glaſs, and blowing through it with the mouth, according to the circumſtances of the glaſs to be blown.

BLOWING *of tin* denotes the melting its ore, after being firſt burnt to deſtroy the mundic.

BLOWING, among gardeners, the ſame with the bloſſoming of plants, or putting forth their flower-leaves.

BLUBBER denotes the fat of whales and other large ſea animals, whereof is made train oil. See the article OIL.

Sea-BLUBBER, a name uſed for the *urtica marina*. See the article URTICA.

BLUE, otherwiſe called AZURE, is one of the primitive colours of the rays of light.

Painters BLUE is made different, according to the different kinds of painting. In limning, freſco, and miniature, they uſe indifferently ultramarine, blue aſhes, and ſmalt: theſe are their natural blues, excepting the laſt, which is partly natural, and partly artificial.

In oil and miniature, they alſo uſe indigo prepared; as alſo a fictitious ultramarine. See the articles ULTRAMARINE and INDIGO.

Enamellers and painters upon glaſs have alſo blues proper to themſelves, each preparing them after their own manner.

Turnſole BLUE is uſed in painting on wood, and is made of the ſeed of that plant: the way of preparing it is, to boil four ounces of turnſole in a pint and half of water, in which lime has been ſlacked.

Flanders BLUE is a colour bordering on green, and ſeldom uſed but in landſkips.

To write on paper or parchment with BLUE *ink*. Grind blue with honey, then temper it with glair of eggs, or gum made of iſing-glaſs.

BLUEING *of metals* is performed by heating them in the fire, till they aſſume a blue colour; particularly practiſed by gilders, who blue their metals before they apply the gold and ſilver leaf.

To dye ſkins BLUE. Boil elder berries or dwarf elder, then ſmear and waſh the ſkins therewith, and wring them out; then boil the berries, as before, in a ſolution of alum-water, and wet the ſkins in the ſame manner once or twice; dry them, and they will be very blue.

Dyers BLUE is one of their ſimple or mother colours, uſed in the compoſition of others. It is made of woad, indigo, and a paſtel brought from Normandy. Some dyers heighten their blue, by adding braſil and other woods.

A BLUE *for painting or ſtaining of glaſs*. Take fine white ſand twelve ounces, zaffer and minium of each three ounces; reduce them to a fine powder in a bell-metal mortar, then putting the powder into a very ſtrong crucible, cover it and lute it well, and, being dry, calcine it over a quick fire for an hour; take out the matter and pound it, then to 16 ounces of this powder, add 14 of nitre powder; mix them well together, and put them into the crucible again; cover and lute it, and calcine for two hours on a very ſtrong fire.

Pruſſian BLUE. This blue is next to ultramarine for beauty, if it be uſed in oil: this colour does not grind well in water. See the article PRUSSIAN BLUE.

BLUE BICE is a colour of good brightneſs, next to pruſſian blue, and alſo a colour of a body, and will flow pretty well in the pencil.

Saunders BLUE is alſo of very good uſe, and may ſerve as a ſhade to ultramarine or the blue bice, where the ſhades are not required to be very deep, and is of itſelf a pleaſant blue, to be laid between the light and ſhades of ſuch a flower as is of a mazarine blue.

A fine BLUE *from Mr. Boyle.* Take the blue leaves of rue, and beat them a little in a ſtone mortar with a wooden peſtle, then put them in water, juice and all, for fourteen days or more, waſhing them every day 'till they are rotten; and at laſt beat them and the water together, 'till they become a pulp, and let them dry in the ſun. This is a fine blue for ſhading.

Indigo-BLUE. This makes the ſtrongeſt ſhade for blues of any other, and is of a ſoft warm colour, when it has been well ground, and waſhed with gum-water, by means of a ſtone and a muller.

Lacmus, or Litmus BLUE. This is a beautiful blue, and will run in a pen as free as ink. It is made of Lacmus, and prepared thus: Take an ounce of lacmus, and boil it in a pint of ſmall beer wort, 'till the colour is as ſtrong as you would have it; then pour off the liquor into a gallipot, and let it cool for uſe. This affords a beautiful colour, has extraordinary effects, and is a holding colour; if it be touched with aqua fortis, it immediately changes to a fine crimſon, little inferior to carmine.

BLUE JAPAN. Take gum-water, what quantity you pleaſe, and white lead a ſufficient quantity, grind them well upon a porphyry; then take iſing-glaſs ſize, what quantity you pleaſe, of the fineſt and beſt ſmalt a ſufficient quantity, mix them well; to which add, of your white lead, before ground, ſo much as may give it a ſufficient body; mix all theſe together to the conſiſtence of a paint.

BLUE BOTTLE, in botany. See CYANUS.

BLUE-CAP, in ichthyology, a ſpecies of ſalmon, with a broad blue ſpot on its head.

BLUEING. See the article BLUE.

BLUE-MANTLE, in heraldry, the title of a purſuivant at arms.

BLUENESS, the quality which denominates a body blue; or it is ſuch a ſize and texture of the parts, which compoſe the ſurface of a body, as diſpoſe them to reflect the blue, or azure rays of light, and thoſe only, to the eye.

As to the blueneſs of the ſkies, Sir Iſaac Newton obſerves, that all the vapours, when they begin to condenſe and coaleſce into natural particles, become firſt of ſuch a bigneſs, as to reflect the azure rays, before they can conſtitute clouds, or any other colour.

BLUFF-HEAD, among ſailors. A ſhip is ſaid to be bluff-headed, that has an upright ſtern.

BLUNDERBUSS, a ſhort fire-arm with a wide bore, capable of holding a number of bullets at once.

BLUSHING, a ſuffuſion, or redneſs of the cheeks, excited by a ſenſe of ſhame, on account of a conſciouſneſs of ſome failing or imperfection.

Bluſhing is ſuppoſed to be produced from a kind of conſent, or ſympathy between the ſeveral parts of the body, occaſioned by the ſame nerve being extended to them all. Thus the fifth pair of nerves, being branched from the brain to the eye, ear, muſcles of the lips, cheeks and palate, tongue and noſe, a thing, ſeen or heard, that is ſhameful, affects the cheeks with bluſhes, driving the blood into their minute veſſels, at the ſame time that it affects the eye and ear. Mr. Derham further obſerves, upon this ſubject, that a ſavory thing, ſeen or ſmelt, affects the glands and parts of the mouth: if a thing heard be pleaſing, it affects the muſcles of the face with laughter; if melancholy, it exerts itſelf on the glands of the eyes, and occaſions weeping, &c. To the ſame cauſe is, by others, the pleaſure of kiſſing aſcribed.

B MI, in muſic, the third note in the modern ſcale. See the article SCALE.

B MOLLARRE, or MOLLE, one of the notes of the ſcale of muſic, uſually called ſoft or flat, in oppoſition to b quadro. See the article B QUADRO.

BOAR, a male ſwine that has not been gelt, kept chiefly for propagation. See the article HOG.

A boar ought to be handſome, to have a truſs body, a thick head, long ſnout, large hanging ears, and ſhort and thick thighs. Such a boar is eſteemed good for generation, from one to five years old. See plate XXIX. fig. 1.

BOAR, in the manege. A horſe is ſaid to boar, when he ſhoots out his noſe as high as his ears, and toſſes his noſe in the wind.

BOARD, a long piece of timber, ſawed

thin for building and ſeveral other purpoſes. See the article TIMBER.

Barrel-BOARDS, imported from Ireland, Aſia, or Africa, pay only 11 $\frac{33}{100}$d. the hundred; but if imported from elſewhere they pay 1 s. 5. $\frac{17}{100}$d. Clapboards pay 4 s. 9 $\frac{33}{100}$d. the hundred; but if imported from Ireland, Aſia, or Africa only 2 s. 10 $\frac{65}{100}$d. Pipe-boards pay 5 s. 8 $\frac{70}{100}$d. the hundred; but if from Ireland, *&c.* only 3 s. 10 $\frac{20}{100}$d. Scale-boards pay 8 s. 5 $\frac{45}{100}$d. the hundred weight; and $\frac{1}{2}$d. more if imported in foreign bottoms.

BOARD, among ſeamen. *To go aboard*, ſignifies to go into the ſhip. *To ſlip by the board*, is to ſlip down by the ſhip's ſide. *Board and board*, is when two ſhips come ſo near as to touch one another, or when they lie ſide by ſide. *To make a board* is to turn to windward; and the longer your boards are, the more you work into the wind. *To board it up*, is to beat it up ſometimes upon one tack, and ſometimes upon another. *She makes a good board*, that is, the ſhip advances much at one tack. *The weather board*, is that ſide of the ſhip, which is to windward.

BOARD is alſo uſed for an office under the government: thus we ſay the board of trade and plantations, the board of works, ordnance, *&c.*

BOARDING *a ſhip*, is entering an enemy's ſhip in a fight.

In boarding a ſhip, it is beſt to bear up directly with him, and to cauſe all your ports to leeward to be beat open; then bring as many guns from your weather ſide, as you have ports for; and laying the enemy's ſhip, on board, looſe for looſe, order your tops and yards to be manned, and furniſhed with neceſſaries; and let all your ſmall ſhot be in a readineſs; then charge, at once, with both ſmall and great, and, at the ſame time, enter your men under cover of the ſmoke, either on the bow of your enemy's ſhip, or bring your midſhip cloſe up with her quarter, and ſo enter your men by the ſhrouds: or if you would uſe your ordnance, it is beſt to board your enemy's ſhip athwart her hawſe; for, in that caſe, you may uſe moſt of your great guns, and ſhe only thoſe of her prow. Let ſome of your men endeavour to cut down the enemy's yards and tackle, whilſt others clear the decks, and beat the enemy from aloft. Then let the ſcuttles and hatches be broke open with all poſſible ſpeed to avoid trains, and the danger of being blown up by barrels of powder placed under the decks.

BOAT, a ſmall open veſſel, commonly wrought by rowing.

The ſtructure, and even the names of boats, are different, according to the different uſes they are deſigned for, and the places where they are to be uſed.

The ſeveral boats and their names are as follow: a long boat, a jolly boat, a ſkiff, a pinnace, a water-boat, a yaul; the preceding ſix are boats for ſhips. Other boats are a gondola, a Greenland boat, a Bermudas boat, a ballon of Siam, a houſe-boat; a periaga, a pleaſure boat, a ponton, a canoe, a crucle, a curry-curry, a deal hooker, a felucca, a ferry-boat, a praw, a flying-praw, a punt, a tilt-boat, a tod-boat, a well-boat, a wherry, *&c.*

The boats or wherries, plying about London, are either ſcullers, wrought by a ſingle perſon with two oars; or oars, wrought by two perſons, with each an oar. All boats, rowed with more than four oars above or below London-bridge, are forfeited, by 8 Geo. c. xviii.

De Chales propoſes the conſtruction of a boat, which, what burden ſoever it bear, ſhall not only move againſt the current, without either ſails or oars, but alſo advance ſo much the faſter, as the rapidity of the water is greater. Its make is the ſame with that of the others, excepting only a wheel added to its ſide, with a cord which winds round a roller, as faſt as the wheel turns.

BOATSWAIN, a ſhip-officer, to whom is committed the charge of all the tacklings, ſails and rigging, ropes, cables, anchors, flags, pendants, *&c.* He is alſo to take care of the long boat and its furniture, and to ſteer her either by himſelf or his mate.

He calls out the ſeveral gangs and companies aboard, to the due execution of their watches, works, ſpells, *&c.* He is likewiſe provoſt-marſhal, who ſees and puniſhes all offenders ſentenced by the captain, or a court-martial of the fleet.

BOATSWAIN'S MATE has the peculiar command of the long boat, for the ſetting forth of anchors, weighing or fetching home an anchor, warping, towing, or mooring; and is to give an account of his ſtore.

BOB, a term uſed for the ball of a ſhort pendulum.

BOB, in ringing of bells, denotes a peal conſiſting

consisting of several courses, or sets of changes.

BOBARTIA, in botany, a genus of the triandria digynia class of plants, the calyx of which is imbricated, and contains only a single flower; the corolla is a glume, consisting of two valves, and placed on the germen: the seed is single, of an oval figure, and is contained in the cup.

BOBBIN, a small piece of wood turned in the form of a cylinder, with a little border jutting out at each end, bored thro' to receive a small iron pivot. It serves to spin with the spinning-wheel, or to wind thread, worsted, hair, cotton, silk, gold, and silver.

There are bobbins of several lengths and sizes, according to the materials which are to be spun or wound. Those used by the silk dealers, and the manufacturers in gold and silver, are thick short bobbins; and so are those used by the woollen manufacturers.

BOBBING, among fishermen, a particular manner of catching eels different from sniggling.

Bobbing for eels is thus performed: they scour well some large lobs, and with a needle run a twisted silk through them from end to end, taking so many as that they may wrap them about a board a dozen times at least: then they tie them fast with the two ends of the silk, that they may hang in so many hanks; which done, they fasten all to a strong cord, and, about an handful and an half above the worms, fix a plummet three-quarters of a pound weight, and make the cord fast to a strong pole. With this apparatus fishing in muddy water, they feel the eels tug softly at the bait; when they think they have swallowed it sufficiently, gently draw up the rope to the top, and bring them ashore.

BOBBIO, a town of the Milanese, in Italy, about twenty-eight miles south east of Pavia; east longitude 10°, and north latitude 44° 35'.

BOCA-CHICA, the entrance into the harbour of Carthagena, in South America, defended by several forts. See the article CARTHAGENA.

BOCA DEL DRAGO, a strait between the island of Trinidad and new Andalusia, a province of Terra Firma. See the article TERRA FIRMA.

BOCARDO, among logicians, the fifth mode of the third figure of syllogisms, in which the middle proposition is an universal affirmative, and the first and last particular negatives, thus:

BO Some sickly persons are not students;
CAR Every sickly person is pale;
DO Therefore some persons are pale that are not students.

BOCCONIA, in botany, a genus of the polyandria-monogynia class of plants, whose corolla consists of four very narrow petals, and whose fruit is of an oval figure, but contracted on each side, long, and compressed, containing only one cell, and filled with pulp. The seed is single and globose.

BOCHARA, a large town of Usbec Tartary, situated on the river Oxus, about sixty miles west of Samarcand, in 65° east longitude, and 40° north latitude.

BOCKHOLT, a town of Munster, in Westphalia, situated in 6° 20' east longitude, and 51° 40' north latitude.

BOCK-LAND, in the Saxons time, is what we now call freehold lands, held by the better sort of persons by charter or deed in writing, by which name it was distinguished from folkland, or copy-hold land, holden by the common people without writing.

BODKIN, a small instrument made of steel, bone, ivory, &c. used for making holes.

The small gross, or twelve dozen, of Bodkins pays on importation 1 s. $3\frac{40}{100}$ d. if of iron or steel, 4 s. $8\frac{25}{100}$ d. and if of brass, only $3\frac{75}{100}$ d.

BODMIN, a borough-town of Cornwall, about twenty-six miles north east of Falmouth, in 5° 10' west longitude, and 50° 32' north latitude.

It sends two members to parliament, and gives the title of viscount to the earl of Radnor.

BODROCH, a town of Hungary, about an hundred miles south east of Buda, and situated on the north-east shore of the Danube, in 20° 15' east longitude, and 46° 15' north latitude.

BODY, in physics, an extended solid substance, of itself utterly passive and inactive, indifferent either to motion or rest; but capable of any sort of motion, and of all figures and forms.

According to the doctrine of the peripatetics, body is composed of matter, form, and privation. According to the epicureans and corpuscularians, the composition consists of an assemblage of hooked heavy atoms. According to the cartesians, of a certain quantity of extension. According to the newtonians, of an association

ſociation of ſolid, maſſy, hard, impenetrable particles, ranged or diſpoſed in this, or in that manner; whence reſult bodies of this or that form, diſtinguiſhed by this or that name.

That all bodies agree in one common matter, the ſchool-men themſelves allow, making what they call the *materia prima*, to be the baſis of them all, and their ſpecific differences to ſpring from their particular forms; and ſince the true notion of body conſiſts either alone in its extenſion, or in that and its impenetrability together, it will follow, that the differences, which make the varieties of bodies we ſee, muſt not proceed from the nature of mere matter, of which we have but one uniform conception, but from certain attributes; ſuch as motion, ſize, poſition, *&c.* which we call mechanical affections.

Affections of BODY. See AFFECTION.

Modes of BODY. See the article MODE.

Elements of BODY. See ELEMENT.

Subſtance of BODIES. We are as far, ſays Mr. Locke, from the idea of the ſubſtance of body, by the complex idea of extended, figured, coloured, and all other ſenſible qualities, which is all we know of it, as if we knew nothing at all: nor, after all the acquaintance and familiarity, which we imagine we have with matter, and the many qualities men aſſure themſelves they perceive and know in bodies, it will, perhaps, upon examination, be found, that they have no more or clearer primary ideas belonging to body, than they have belonging to the immaterial ſpirit. The primary ideas we have peculiar to body, as contra-diſtinguiſhed from ſpirit, are the coheſion of ſolid, and conſequently ſeparable parts, and a power of communicating motion by impulſe. See the article SUBSTANCE.

Exiſtence of BODIES is a thing incapable of being demonſtrated. The order in which we arrive at the knowledge of their exiſtence, ſeems to be this: we firſt find we have ſenſations, afterwards we obſerve, that we have not theſe ſenſations when we pleaſe; and thence conclude, that we are not the abſolute cauſe thereof, but that there is required ſome other cauſe for their production.

It is, however, a ſubject of great diſpute, whether external bodies have any exiſtence but in the mind; that is, whether they really exiſt, or exiſt in idea only; the former opinion is ſupported by Mr. Locke, and the latter by Dr. Berkley, as may be ſeen at ſome conſiderable length under the article EXISTENCE.

Colour of BODIES. Sir Iſaac Newton ſhews, that bodies appear of this or that colour, as they are diſpoſed to reflect moſt copiouſly the rays of light, originally endued with ſuch colours: but the particular conſtitutions, whereby they reflect ſome rays more copiouſly than other, remain yet to be diſcovered. See COLOUR.

Deſcent of BODIES. Heavy bodies, in an unreſiſting medium, fall with an uniformly accelerated motion; whence the ſpaces deſcended are in the duplicate ratio of the times and velocity, and increaſe according to the uneven numbers 1, 3, 5, *&c.* The times and velocities are in a ſubduplicate ratio of the ſpaces. The velocity of deſcending bodies is, in proportion to the times from the beginning of their fall; and the ſpaces deſcribed by a falling body, are, as the ſquares of the times from the beginning of their fall. See the articles DESCENT, ACCELERATION, and MOTION.

Diviſion of BODIES is generally into animate and inanimate; into thoſe informed by a ſoul, and thoſe that are not. Bodies are alſo divided into alkaline bodies, conſiſtent bodies, elaſtic bodies, fixed bodies, heterogeneous bodies; for which ſee the articles ALKALINE, CONSISTENT, ELASTIC, *&c.*

BODY, with regard to animals, is uſed in oppoſition to ſoul, in which ſenſe it makes the ſubject of anatomy, and is that part of the animal compoſed of bones, muſcles, canals, juices, nerves, *&c.* which, if conſidered with regard to the various voluntary motions it is capable of performing, is an aſſemblage of an infinite number of levers, drawn by cords: if conſidered with regard to the motions of the fluids it contains, it is another aſſemblage of an infinity of tubes and hydraulic machines; and if conſidered with regard to the generation of thoſe fluids, it is another infinite aſſemblage of chemical inſtruments and veſſels, the principal apparatus whereof, in the whole body, is the brain, that wonderful laboratory.

In the machine of the animal body, the retainers to the doctrine of trituration maintain the brain to do the office of the beam of a preſs, the heart of a piſton, the lungs of bellows, the mouth of a millſtone, and the teeth of peſtles; the ſtomach of a preſs, the inteſtines of a reſervoir, the veſſels of ſieves and ſtrainers, and

and the air of a pondus or ſpring, that ſets the machine a-going.

BODY is uſed by anatomiſts to denote ſeveral particular parts of the animal fabric, as the callous body of the brain, &c.

The diviſion of BODY, among phyſicians, is into ſolids and fluids, alſo into venters or cavities, the head, thorax, and lower venter; the reſt of the body they call members or extremities.

The peripatetics maintained, that the ſoul was the form of the human body; but ſo far is animal life from depending on the ſoul, becauſe of its ceaſing when the ſoul is ſeparated, that, on the contrary, the continuance of the ſoul depends intirely on the ſtate of the body; the former never quitting the latter, till its œconomy or order is interrupted.

The carteſians maintain the ſoul and body to be too diſproportionate for the ideas of the ſoul to be cauſed by the motions of the body, and *vice verſa*. Thus their reciprocal motions, not being able to be the direct cauſe of the one and the other, are only deemed the occaſion, or occaſional cauſe. God, on occaſion of the motion of a body, impreſſes an idea of ſenſation on the ſoul; and again, on occaſion of an idea of the ſoul, communicates a motion to the body: conſequently, according to them, God is the only agent of the whole intercourſe between ſoul and body.

Reticular BODY. See RETICULAR.

BODY, in geometry, is otherwiſe called a ſolid. See the article SOLID.

The regular bodies, or thoſe which have all their angles and ſides ſimilar and equal, are five, *viz.* the tetrahedron, octahedron, dodecahedron, icoſahedron, and the cube. See TETRAHEDRON, &c.

BODY, in law. A man is ſaid to be bound or held in body and goods; that is, he is liable to remain in priſon, in default of payment.

In France, all reſtraints of the body for civil debts are null after four months, unleſs the ſum exceeds two hundred livres.

A woman, though in other reſpects ſhe cannot engage her perſon but to her huſband, may be taken by the body, when ſhe carries on a ſeparate trade.

BODY, among painters, as to bear a body, a term ſignifying that the colours are of ſuch a nature, as to be capable of being ground ſo fine, and mixing with the oil ſo intirely, as to ſeem only a very thick oil of the ſame colour.

But ſuch colours as are ſaid not to bear a body, will readily part with the oil when laid on the work; ſo that when the colour ſhall be laid on a piece of work, there will be a ſeparation; the colour in ſome parts, and the oil in others, except they are tempered extraordinary thick.

BODY, in the manege. A horſe is chiefly ſaid to have a good body, when he is full in the flank. If the laſt of the ſhort ribs be at a conſiderable diſtance from the haunch bone, although ſuch horſes may, for a time, have pretty good bodies, yet, if they are much laboured, they will loſe them; and theſe are properly the horſes that have no flank. It is alſo a general rule, that a man ſhould not buy a light-bodied horſe, and one that is fiery, becauſe he will ſoon deſtroy himſelf.

BODY, in the art of war, a number of forces, horſe and foot, united and marching under one commander.

Main BODY *of an army*, the troops encamped in the center between the two wings, and generally infantry: the other two bodies are the vanguard and the rearguard; theſe being the three into which an army, ranged in form of battle, is divided.

BODY *of reſerve*. See *Body of* RESERVE.

BODY, in matters of literature, denotes much the ſame with ſyſtem, being a collection of every thing belonging to a particular ſcience or art, diſpoſed in proper order: thus, we ſay, a body of divinity, law, phyſic, &c.

BOEDROMIA, in grecian antiquity, a feſtival celebrated yearly by the Athenians in the month boedromion; for the ceremonies of which, ſee Potter's arch. græc. b. ii. c. 20.

BOEDROMION, in chronology, the third month of the athenian year, anſwering to the latter part of our Auguſt and beginning of September.

BOERHAAVIA, in botany, a genus of the monandria-monogynia claſs of plants, whoſe flower conſiſts of a ſingle campanulated petal, erect, and of a quinquangular form, divided into five ſegments, that are ſhort and emarginated. The fruit is a turbinated capſule, furrowed on the ſurface, and forming only one cell, within which there is lodged a ſingle ſeed.

BOESCHOT, a town of the auſtrian Netherlands, ſituated in Brabant, about twelve miles north-eaſt of Malines, in 4° 40′ eaſt longitude, and 51° 5′ north latitude.

BOG properly ſignifies a quagmire, covered indeed with graſs, but not ſolid enough to ſupport the weight of the body; in which ſenſe, it differs only from marſhes or fens, as a part from the whole: ſome even reſtrain the term bog to quagmires pent up between two hills; whereas fens lie in champaign and low countries, where the deſcent is very ſmall.

Bogs are frequent in Ireland, where they diſtinguiſh between a turf bog, called alſo red bog, out of which turf or peat is dug; and a quaking bog, which will ſink under a man in the place where he ſtands to a conſiderable depth; underneath is frequently clear water, into which a perſon may ſlip up to the middle upon breaking the ſurface.

Every red bog is encompaſſed with a deep marſhy ſloughy ground, called the bounds of the bog. — The inconveniencies of bogs are, that a conſiderable part of the kingdom is rendered uſeleſs by them; they alſo keep people at a diſtance from each other, and thus hinder buſineſs from going forward. Bogs have alſo their uſes; moſt of the people in Ireland have their firing from them; the wood being impolitiely deſtroyed, the Iriſh could hardly do without ſome bogs.

The natives had antiently another advantage from bogs; — that by means of them they were preſerved from the conqueſt of the Engliſh: and it ſeems to be from the remembrance thereof, that they ſtill chuſe to build near bogs.

As to the *origin and formation of* BOGS, it is to be obſerved, that there are few places in the northern world, but have formerly been as famous for them as Ireland now is; every wild ill-inhabited country has them; the Loca Paluſtria, or Paludes, to which the antient Gauls, Germans, and Britons retired, when beaten, appear to be no other than what we now call bogs. The like may ſtill be found in the barren parts of Italy, as Liguria. The true cauſe of bogs ſeems to be the want of induſtry; at leaſt it is certain induſtry may remove, and much more prevent them; therefore it is no wonder if a country famous for lazineſs ſhould abound with them; it is not impoſſible to drain bogs, ſo as to render them fit for paſture or arable, the ſame having been performed in England, France, &c. People commonly diſtinguiſh between bogs that have no fall to carry away the water, and thoſe which have; the laſt are reputed drainable, and the former not; but Mr. King aſſures us, he never knew a bog but had a ſufficient fall to drain it; nor does he believe there is any in reality but always have: the great objection againſt draining, is the charge which, it is commonly reckoned, would amount to much more than would purchaſe an equal quantity of good ground; for an acre of this laſt, in moſt parts of Ireland, is not worth more than four ſhillings *per ann.* and fourteen or fifteen years purchaſe; ſo that three pounds will buy an acre of good ground; and it is very doubtful with moſt, whether that ſum will reduce a bog. This reaſoning paſſes current, and this is the great impediment of this work. To this it is anſwered that quaking bogs, though land be never ſo cheap, never fail to be worth draining; one trench will drain many acres, and, when dry, it is the beſt meadow or grazing ground. Again what is called the bounds of a red bog, never fails to be worth draining, being done by one deep trench drawn round the bog; by this cattle are kept out of the bog, and the bounds turned into meadow.

Add, that even red bogs might be made fit for grazing, at a much cheaper rate than has hitherto been done, by a proper conduct in digging of trenches, particularly deſcribed by Mr. King.

Though ſome bogs are of a great depth, yet no more is required than to drain them to a certain level, which may be done ſeveral ways; 1ſt, by making a channel to carry off the water; 2dly, by throwing in plenty of dry earth, when they are almoſt dried up by the heat of the ſun; 3dly, by ſetting their ſurfaces on fire; 4thly, by turning the water that feeds them another way.

To drain BOGGY *lands*, a good method is, to make trenches of a ſufficient depth to carry off the moiſture; and if theſe are partly filled up with rough ſtones, and then covered with thorn buſhes and ſtraw to keep the earth from filling up their interſtices, a ſtratum of good earth and turf may be laid over all; the cavities among the ſtones will give paſſage to the water, and the turf will grow at top, as if nothing had been done. See FEN.

BOG, in geography, a river of Poland, which, running ſouth eaſt through the province of Podolia and Buziac Tartary, falls into the Euxine ſea between Oczakow and the mouth of the Boriſthenes.

BOG, or BOG OF GICHT, a ſmall town of Scotland, near the mouth of the river Spey,

Spey, ſituated in 2° 23′ weſt longitude, and 57° 40′ north latitude.

BOGHO, or BUEIL, a town in the county of Nice, in Piedmont, ſituated on the frontiers of France, about twenty-five miles north-weſt of Nice, in 6° 45′ eaſt longit. and 44° 12′ north latit.

BOGOMILI, or BOGARMITÆ, in church-hiſtory, a ſect of heretics, which ſprung up about the year 1179. They thought that but ſeven books of the ſcripture are to be received, that the uſe of churches, of the ſacrament of the Lord's ſupper, and all prayer, except the Lord's prayer, ought to be aboliſhed; that the baptiſm of catholics is imperfect, that the perſons of the trinity are unequal, and that they oftentimes made themſelves viſible to thoſe of their ſect. They ſaid, that devils dwelt in the churches, and that ſatan had reſided in the temple of Solomon from the deſtruction of Jeruſalem to their own time.

BOGOTO, the capital of New Granada, in Terra Firma, ſituated in 74° weſt longitude, and 4° north latitude.

BOHEA, in commerce, one of the beſt kinds of tea that come from China. There are three ſorts of it: the firſt is bought at Canton for 80 tals per picë; the ſecond for 45; and the third for 25. See the article TEA.

BOHEMIA, a kingdom ſubject to the houſe of Auſtria, bounded by Saxony on the north, by Poland and Hungary on the eaſt, by Auſtria on the ſouth, and by Bavaria and part of Saxony on the weſt. It lies between 12° and 17° eaſt long. and 48° and 52° north lat.

BOHOL, one of the Philippine-iſlands, in Aſia; eaſt long. 122°, and north lat. 10°.

BOJANO, a city of Moliſe, in the kingdom of Naples, about fifteen miles north of Benevento; eaſt longitude 15° 20′, and north latitude 41° 20′.

BOIGUACU, the largeſt of all ſerpents, being from twenty-four to forty feet long, and thick in proportion. It is found in the Eaſt and Weſt-Indies, where the Europeans, as well as the natives, are extremely fond of it as food. See plate XXIX. fig. 4.

The boiguacu is a very terrible animal, lying in ambuſh in thickets or on branches of trees; from whence it darts itſelf on its prey. Authors of credit tell us, that it will ſwallow a goat, a bear, and even a ſtag, horns and all.

BOIL, or FURUNCLE, in ſurgery. See the article FURUNCLE.

BOILING, or EBULLITION, in phyſics, the agitation of a fluid body, ariſing from the application of fire, &c.

The phænomena of boiling may be thus accounted for: the minute particles of the fuel, being detached from each other, and impelled *in orbem* with a great velocity, *i. e.* being converted into fire, paſs the pores of the containing veſſel, and mix with the fluid. By the reſiſtance they here meet, their motion is deſtroyed; that is, they communicate it wholly to the quieſcent water; hence ariſes, at firſt, a ſmall inteſtine motion in the water, and from the continued action of the firſt cauſe, the effect is increaſed, and the motion of the water continually accelerated; ſo that, by degrees, it becomes ſenſibly agitated. But now the particles of fire, ſticking on thoſe in the loweſt ſurface of the water, will not only give them an impulſe upwards, contrary to the laws of equilibrium, but will likewiſe render them ſpecifically lighter than before, ſo as to determine them to aſcend according to the laws of equilibrium; and this, either by inflating them into little veſicles, by the attraction of the particles of water around them, or by breaking and ſeparating the little ſpherules of water, and ſo increaſing the ratio of their ſurface to their ſolid content. There will be, therefore, a conſtant flux of water from the bottom to the top of the veſſel, and conſequently a reciprocal flux from the top to the bottom; that is, the upper and under water will change places; and hence we have the reaſon of that phænomenon of the water being hot at top, ſooner than at bottom.

Again, an intenſe heat will diminiſh the ſpecific gravity of water, ſo as not only to make it mount in water, but alſo in air; whence ariſe the phænomena of vapour and ſmoke, though the air, incloſed in the interſtices of the water, muſt be allowed a good ſhare in this appearance; for that air, being dilated and its ſpring ſtrengthened by the action of the fire, breaks its priſon, and aſcends through the water into the air, carrying with it of the contiguous ſpherules of water, ſo many as ſhall hang in its villi, or as can adhere immediately to it.

The particles of the air, in the ſeveral interſtices of the fluid maſs thus expanded and moving upwards, will meet and coaleſce in their paſſage; by which means great quantities of the water will be heaved up and let down alternately,

Fig. 1. BOAR.



Fig. 2. BONASUS.



Fig. 3. BOOPS.

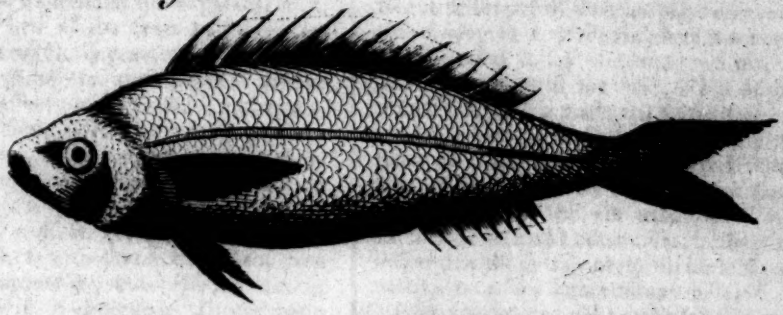


Fig. 4. BOIGUACU.

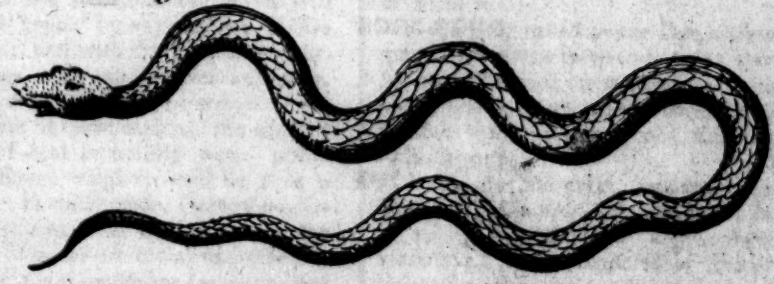
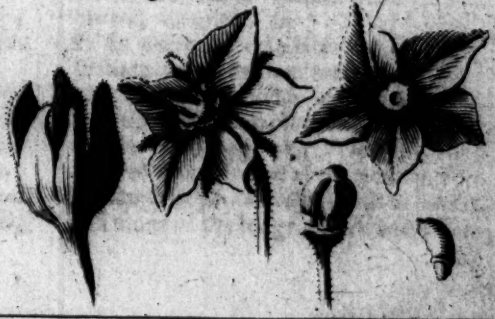


Fig. 5. BORDURE.



Fig. 6. BORRAGO.



J. Jefferys sculp.



BRITISH MUSEUM



as the air riſes up, and again paſſes from the water; for the air, after coalition, though it may buoy up a great heap of water by its elaſticity, while in the water, yet cannot carry it up with itſelf into the atmoſphere; ſince, when once got free from the upper ſurface of the water in the veſſel, it will unbend itſelf in the atmoſphere, and ſo its ſpring and force become juſt equal to that of the common unheated air; and hence we ſee the reaſon of the principal phænomenon of boiling, *viz.* the fluctuating of the ſurface of the water.

The ingenious Mr. Amontons has ſhewn, that water heated to a degree of boiling, will not conceive any further heat, how much ſoever the fire be increaſed. Yet this excellent diſcovery may receive a conſiderable improvement from what Mr. Fahrenheit has obſerved, *viz.* that the heat of the ſame boiling water is always regularly greater, by how much the weight of the atmoſphere is greater which preſſes upon its ſurface: and again, that the ſame heat of the boiling water diminiſhes, as the weight of the incumbent atmoſphere grows leſs. Hence in marking the degree of heat in boiling water, it will be neceſſary to note the weight of the atmoſphere at the ſame time by the barometer; otherwiſe no certain meaſure will be expreſſed. In the mean time, however, it muſt be allowed, that ſo long as the preſſure of the atmoſphere continues the ſame, boiling water will not grow hotter by any increaſe of fire whatever; and with this limitation, Mr. Amontons' rule will for ever hold true. When the difference of the weight of the atmoſphere is three ounces, the greateſt degree of heat in boiling water, under theſe different weights, will be 8 or 9 degrees. From whence, the author evidently deduces, that by how much the particles of water are more compreſſed to each other upon increaſing the incumbent weight, by ſo much the more fire is required to make them recede from each other, wherein ebullition conſiſts. Hence alſo he concluded, that a thermometer applied in boiling water, would mark by the degrees of heat it expreſſes, the gravity of the atmoſphere at that time.

Water, in the receiver of an air-pump, when exhauſted, will boil without any great heat. The receiver ſhould, for this experiment, be one part full of water, and three empty: in this caſe, the flame of a candle being placed under the veſſel, the water will boil violently, while the glaſs itſelf is ſcarce warm; and when the water has been thus kept boiling a quarter of an hour, the glaſs will ſcarce be any thing the hotter for it. When the candle is taken away, the water will ſtill continue a great while boiling, and when it ceaſes firſt, will renew itſelf again from time to time to a very great ebullition. All the bubbles that riſe out of the water on this occaſion, do not raiſe the mercury in a gage to any ſenſible height.

Spirit of wine, in the ſame manner, boils much ſooner in vacuo than the water, and in this ſtate will raiſe the mercury in the gage to an inch higher than its former ſtandard. If the receiver containing it in this boiling ſtate, be plunged into cold water, the liquor, inſtead of becoming calm, boils more ſtrongly than before. It might be ſuppoſed, that this phænomenon was owing to a periſtaſis; but we have more ground to ſay it came from hence, that the vapours of the ſpirit were more condenſed, and ſo made the receiver more empty, which is ſufficient to make the ſpirit of wine boil, though it were not hot, as liquors uſually do when put into the engine, and the air exhauſted. In all theſe, and many other caſes, boiling is induced without that heat, which is ſuppoſed a neceſſary concomitant of it.

BOIS DE SOIGNIES, the foreſt of Soignies, in the auſtrian Netherlands, and province of Brabant, about three miles ſouth-eaſt of Bruſſels.

BOISLEDUC, called by the Dutch Hertogenboſch, a large fortified town of dutch Brabant, ſituated on the river Bommel, about twenty-three miles north-eaſt of Breda; eaſt longitude 5° 20′, and north latitude 51° 45′.

BOLE, a genus of earth, moderately coherent, ponderous, ſoft, and not ſtiff or viſcid, but in ſome degree ductile while moiſt; and compoſed of fine particles, ſmooth to the touch, eaſily breaking between the fingers, readily diffuſible in water, and freely and eaſily ſubſiding from it.

Boles are either white, yellow, red, brown, or green.

I. Of white boles we have the following ſpecies. 1. The pure white bole armenic, eſteemed a ſudorific and aſtringent, but unknown to our ſhops. 2. A white friable bole, dug near Frankfort, and counted ſudorific and aſtringent, and accordingly preſcribed in ſpittings of blood, and ulcers of the lungs. 3. A hard, hea-

vy white bole, called *terra nocerana*, in great eſteem in malignant fevers, and againſt the bites of venemous animals. 4. The white lemnian earth, a light, white bole, eſteemed good in dyſenteries, hæmorrhages, and malignant fevers. 5. The greyiſh-white bole, called earth of Goltberg, and uſed as an aſtringent, cordial, and ſudorific. 6. The yellowiſh-white bole, or tuſcan earth, preſcribed as a ſudorific, and in diarrhœas. 7. A white, ſoft, heavy bole, called earth of Malta, preſcribed againſt venemous bites. 8. A whitiſh alkaline bole, called eretrian earth, and ſaid to be a noble aſtringent and ſudorific. 9. A hard, whitiſh, alkaline bole, found near Bengal, and uſed with ſucceſs in fluxes and fevers.

II. Of the yellow boles, theſe are the ſpecies. 1. The yellow bole armenic, ſaid to be an excellent aſtringent, ſudorific, and alexipharmic. 2. The bole of Blois, of a pure and light yellow colour, and a powerful aſtringent. 3. The friable, yellow bole of Tokay, eſteemed a good aſtringent. 4. The yellow lemnian earth, accounted a good ſudorific, aſtringent, and vulnerary. 5. The friable gold-coloured bole, brought from Weſtphalia, frequently uſed in cordial and aſtringent electuaries. 6. The browniſh-yellow bole, called ſileſian earth, a good aſtringent. 7. The light, friable, reddiſh-yellow bole, called livonian earth, eſteemed a better aſtringent than moſt of the other boles. 8. The firm and heavy reddiſh-yellow bole, called bohemian bole, eſteemed an excellent medicine in malignant fevers, and fluxes of all kinds.

III. Of the red boles, authors enumerate the following ſpecies. 1. A hard red bole, or bole armenic of Avicenna; a good aſtringent, but ſeldom met with genuine. 2. A heavy, compact, pale-red bole, dug in many parts of France. 3. A light friable, dull-red bole, called ſealled earth of Striga. 4. A heavy, friable, red bole, called livonian earth; a powerful aſtringent. 5. A heavy, friable, pale-red bole, called ſealled earth of Tuſcany; preſcribed in fevers, and fluxes of all kinds, with good ſucceſs. 6. A friable, weighty, fine red bole, found in Portugal, and eſteemed a good medicine againſt poiſons, and in malignant fevers. 7. The red lemnian earth, which is hard and weighty. 8. The friable greyiſh-red bole, called Turky earth, uſed as a ſudorific and aſtringent. 9. A hard pale-red bole, found in many parts of America.

IV. Of the brown boles, there are only three ſpecies. 1. A pure, pale-brown bole, ſaid to be a good aſtringent. 2. The denſe, heavy, pale-brown bole, found in many parts of Germany, and uſed as a ſudorific and aſtringent. 3. The light, friable, brown-bole, found in many parts of England, thought to be a good aſtringent.

V. Of the green boles, there is only one known ſpecies, found in the perpendicular ſtrata of ſtone in many parts of England, and thought improper to be uſed internally in medicine, on account of the copper it contains.

BOLETUS, in botany, a genus of the cryptogamia fungi claſs of plants, growing horizontally, and porous underneath.

BOLINGBROOK, or BULLINGBROKE, a market-town of Lincolnſhire, about twenty-five miles eaſt of Lincoln: eaſt longitude 15′, and north lat. 53° 15′.

BOLLARDS, large poſts ſet into the ground, on each ſide of a dock: on docking or undocking ſhips, large blocks are laſhed to them; and thro' theſe blocks are reeved the tranſporting hawſers to be brought to the capſtons.

BOLLITO, a name by which the Italians call a ſea-green colour in artificial cryſtal. To prepare this colour, you muſt have in the furnace a pot filled with forty pounds of good cryſtal, firſt carefully ſkimmed, boiled, and purified, without any manganeſe: then you muſt have twelve ounces of the powder of ſmall leaves of copper, thrice calcined, half an ounce of zaffer in powder: mix them together, and put them at four times into the pot, that they may the better mix with the glaſs, ſtirring them well each time of putting in the powder, for fear that it ſhould ſwell too much and run over.

BOLOGNA, a city of Italy, fifty miles north of Florence. It is about five miles in circumference, and is remarkable for its magnificent churches and monaſteries, as well as for its univerſity, which is one of the moſt conſiderable in Europe: eaſt long. 11° 40′, and north lat. 44° 30′.

BOLOGNE, or BOULOGNE. See the article BOULOGNE.

BOLSENNA, a town of the pope's territories in Italy, about forty-five miles north

north of Rome, at the north end of a lake to which it gives name: east long. 13°, and north latitude 42° 40′.

BOLSLAW, a town of Bohemia, ſituated on the river Sizera, about thirty miles north-eaſt of Prague; eaſt longitude 14° 45′, and north latitude 50° 24′.

BOLSTERS *of a ſaddle*, thoſe parts of a great ſaddle which are raiſed upon the bows, both before and behind, to hold the rider's thigh, and keep him in a right poſture.

BOLSWAERT, a town of weſt Friezland, in the united provinces, about eighteen miles ſouth-weſt of Lewarden: eaſt longitude 5° 20′, and north latitude 53° 10′.

BOLT, among builders, an iron faſtening fixed to doors and windows. They are generally diſtinguiſhed into three kinds, *viz.* plate, round, and ſpring bolts.

Bolts in gunnery are of ſeveral ſorts, as, 1. Tranſum bolts, that go between the cheeks of a gun-carriage, to ſtrengthen the tranſums. 2. Priſe bolts, the large knobs of iron on the cheeks of a carriage, which keep the hand-ſpike from ſliding when it is poizing up the breech of a piece. 3. Traverſe bolts, the two ſhort bolts that being put one in each end of a mortar carriage, ſerve to traverſe her. 4. Bracket bolts, the bolts that go through the cheeks of a mortar, and by the help of quoins keep her fixed at the given elevation. And, 5. Bed bolts, the four bolts that faſten the brackets of a mortar to the bed.

Bolts in a ſhip are iron pins of which there are ſeveral ſorts, according to their different make and uſes. Such are, Drive bolts, uſed to drive out others. Ray bolts, with jags or barbs on each ſide, to keep them from flying out of their holes. Clench bolts, which are clenched with rivetting hammers. Forelock bolts, which have at the end a forelock of iron driven in to keep them from ſtarting back. Set bolts, uſed for forcing the planks, and bringing them cloſe together. Fend or fender bolts, made with long and thick heads, and ſtruck into the uttermoſt bends of the ſhip, to ſave her ſides from bruiſes. And ring bolts, uſed for bringing to of the planks, and thoſe parts whereto are faſtened the breeches and tackles of the guns.

BOLTHEAD, among chemiſts, the ſame with cucurbit. See CUCURBIT.

BOLTING, a term formerly uſed in our inns of court, for the private arguing of cauſes. An antient and two barriſters ſat as judges, and three ſtudents bringing each a caſe, out of which the judges choſe one to be argued, the ſtudents firſt began to argue it, and after them the barriſters. It was inferior to mooting. See the article MOOT.

BOLTON, a market-town of Lancaſhire, about twenty-ſeven miles north-eaſt of Liverpool; weſt longitude 2° 20′, and north latitude 53° 35′.

BOLUS, an extemporaneous form of a medicine, ſoft, coherent, a little thicker than honey, and the quantity of which is a little morſel or mouthful; for which reaſon it is by ſome called buccella.

Whatever is fit for internal uſe, either by itſelf, or when mixed with other ſubſtances, provided it is capable of the abovementioned conſiſtence, is a proper material for the compoſition of a bolus. Such are ſoft ſubſtances more or leſs thick, as conſerves, electuaries, robs, pulps, extracts, ſyrups and liquid ſubſtances, as oils, ſpirits, eſſences, elixirs, &c. The doſe of a bolus may be extended from one dram to one dram and a half, or two drams.

BOMAL, a town of Luxemburg, in the auſtrian Netherlands, ſituated on the river Ourt, about twenty miles ſouth of Liege; eaſt longitude 5° 30′, north lat. 50° 20′.

BOMB, in military affairs, a large ſhell of caſt iron, having a great vent to receive the fuſee, which is made of wood. The ſhell being filled with gunpowder, the fuſee is driven into the vent or aperture, within an inch of the head, and faſtened with a cement made of quick-lime, aſhes, brick-duſt, and ſteel-filings, worked together in a glutinous water: or of four parts of pitch, two of colophony, one of turpentine, and one of wax. This tube is filled with a combuſtible matter, made of two ounces of nitre, one of ſulphur, and three of gunpowder duſt, well rammed. To preſerve the fuſee, they pitch it over, but uncaſe it when they put the bomb into the mortar, and cover it with gunpowder duſt; which having taken fire by the flaſh of the powder in the chamber of the mortar, burns all the time the bomb is in the air; and, the compoſition in the fuſee being ſpent, it fires the powder in the bomb, which burſts with great force, blowing up whatever is about it. The great height the bomb goes in the air, and the force with which it falls, makes it go deep into the earth.

For

For the theory of throwing bombs, ſee the article PROJECTILES.

BOMB-CHEST, a kind of cheſt filled uſually with bombs, ſometimes only with gunpowder, placed under ground to tear it and blow it up into the air, with thoſe who ſtand on it. It was ſet on fire by means of a ſauciſſe faſtened at one end, but is now much diſuſed.

BOMBARD, a piece of ordnance antiently in uſe, exceedingly ſhort and thick, and with a very large mouth. There have been bombards which have thrown a ball of 300 pound weight. They made uſe of cranes to load them.

The Bombard is by ſome called baſiliſk, and by the Dutch, donderbuſs. See the article BASILISK.

BOMBARDIER, a perſon employed about a mortar. His buſineſs is to drive the fuſee, fix the ſhell, load and fire the mortar, and to work with the fire-workers on all ſorts of fire-works, whether for war or recreation.

BOMBARDMENT, the havock committed in throwing bombs into a town or fortreſs.

BOMBARDO, a muſical inſtrument of the wind kind, much the ſame as the baſſoon, and uſed as a baſe to the hautboy.

BOMBASINE, a name given to two ſorts of ſtuffs, the one of ſilk, and the other croſſed, of cotton.

Bombaſine of ſilk pays duty on importation as other foreign ſilks. See SILK. That of cotton pays each piece, not exceeding 15 yards, if narrow, 1 l. 3 s. $1\frac{20}{100}$d. but if broad, 2 l. 6 s. $11\frac{40}{100}$d.

BOMBAST, in matters of literature, high ſwelling language made up of hard words, with little meaning, and leſs ſenſe.

BOMBAX, in botany, a genus of the polyandria monogynia claſs of plants, the calyx of which is a large coloured permanent perianthium, conſiſting of four or five leaves: the corolla conſiſts of a great number of petals (oftentimes fifteen) leſs than the cup; the fruit is a hard oval, fleſhy berry, containing many cells (from ten to fifteen) and full of pulp; the ſeeds are numerous and roundiſh.

BOMBAY, an iſland on the weſt coaſt of the higher peninſula of India, ſituated in 72° 20′ eaſt long. and 18° 30′ north lat. It is about ſeven miles long, and twenty in circumference; and is the property of our Eaſt India company.

BOMB-KETCH, a ſmall veſſel built and ſtrengthened with large beams for the uſe of mortars at ſea.

BOMBUS, in medicine, a reſounding and ringing noiſe in the ear, which is accounted by Hyppocrates a mortal ſymptom in acute diſeaſes.

BOMBYX, the ſilk-worm, in zoology. See the article SILK.

Bombyx was alſo uſed, by antient naturaliſts, indifferently for ſilk or cotton.

BOMENE, a port town of Zeland, in the united provinces, ſituated on the northern ſhore of the iſland Schonen, oppoſite to the iſland of Goree; eaſt longitude 4°, and north latitude 51° 50′.

BOMMEL, a town of dutch Guelderland, ſituated on the northern ſhore of the river Waall, about four miles north-eaſt of Nimeguen: eaſt longitude 5° 50′, and north latitude 52°.

BOMONICI, in grecian antiquity, young men of Lacedæmon, who contended at the ſacrifices of Diana which of them was able to endure moſt laſhes; being ſcourged before the altar of this goddeſs.

BON, in geography, a town of the electorate of Cologn, in Germany, ſituated on the weſtern ſhore of the river Rhine, about twelve miles ſouth of Cologn; eaſt longitude 7°, and north latitude 50° 35′. It is a ſmall but well fortified town, and has a fine palace, which the elector of Cologn makes his uſual reſidence.

BONA, in geography, a port town of the kingdom of Algiers, in Africa, about two hundred miles eaſt of the city of Algiers; eaſt longitude 8°, north lat. 36°. There is alſo a cape called Bona, on the ſame coaſt to the eaſtward, almoſt oppoſite to Sicily.

BONA-FIDES, or BONA-FIDE, among lawyers, is as much as to ſay, ſuch a thing was done really, without either fraud or deceit.

A man is ſaid to poſſeſs any thing *bona-fide*, who is ignorant of that thing's being the property of another; on the contrary, he is ſaid to poſſeſs a thing *mala-fide*, who is conſcious of its being the property of another.

BONA NOTABILIA, are ſuch goods as a perſon dying has in another dioceſe beſides that wherein he dies; amounting to the value of 5 l. at leaſt; in which caſe the will of the deceaſed muſt be proved, or adminiſtration granted in the court of the archbiſhop of the province, unleſs by compoſition, or cuſtom, any dioceſes are authoriſed

thoriſed to do it, when rated at a greater ſum.

BONA PATRIA, an aſſiſe of countrymen, or good neighbours, where twelve or more are choſen out of the country to paſs upon an aſſiſe, being ſworn judicially in the preſence of the party.

BONAIRE, an iſland near the coaſt of Terra Firma, in South America, ſituated in 67° weſt long. and 12° 30′ north lat. It is ſubject to the Dutch, who traffic from thence with the Caraccao-coaſt.

BONASUS, in zoology, a ſpecies of wild ox, very thick and bulky, and furniſhed with a mane like a horſe. See plate XXIX. fig. 2.

The bonaſus is a very unwieldy animal, being larger than our bull: the horns are but ſhort, and ſo turned as to be unfit for wounding; the noſtrils are wide and the ears long and broad; the colour of the animal is a deep tawny; only the forehead and the breaſt are white, and the mane is of a darker colour than that of the reſt of the body. When purſued, it does not attempt to defend itſelf with its horns, but kicks, and diſcharges its dung to a great diſtance againſt the purſuers.

BONAVISTA, one of the cape Verd-iſlands, ſubject to Portugal: weſt long. 23°, and north lat. 16° 30′.

BOND, an obligatory inſtrument, or deed, in writing, whereby one binds himſelf to another to pay a certain ſum of money, or perform ſome certain acts; as that the obligor ſhall make a releaſe, execute a ſufficient conveyance of his eſtate, ſave the obligee harmleſs, perform the covenants of a deed, &c.

A bond contains an obligation with a penalty, and a condition generally written under it, which expreſsly mentions the ſum that is to be paid, or other thing to be performed, and to whom, with the limited time thereof, for which the obligation is peremptorily binding.

The condition of a bond muſt be to do ſomething lawful; for if it be to perform an act *malum in ſe*, as to kill a perſon, &c. it is void: likewiſe bonds not to uſe trades, &c. are unlawful and void: ſo alſo are bonds made by compulſion, by infants, and *feme coverts*, &c. but if a drunken man voluntarily gives his bond, it ſhall bind him; and a bond, though it be without any conſideration, is binding. Where a bond has no date, or a falſe one is inſerted therein, if it be ſealed and delivered, it is a good bond; and a perſon ſhall not be charged by any bond, though ſigned and ſealed, without delivery or words, or other thing, amounting to it. Notwithſtanding a bond be made to pay money on the 30th of February, and there be no ſuch day, the bond is good, and the money ſhall be paid preſently. It is the ſame if no time is limited; in that caſe it muſt be immediately paid, or in convenient time.

If a bond be of twenty years ſtanding, and no demand is proved to be made thereon, or good cauſe ſhewn for ſo long forbearance, upon pleading the payment at the day, it ſhall be intended paid.

BOND, in carpentry, a term among workmen; as, to make good bond, means that they ſhould faſten the two, or more pieces, together, either by tenanting, mortiſing, or dovetailing, &c.

BONDAGE, properly ſignifies the ſame with ſlavery; but, in old law-books, is uſed for villenage. See VILLENAGE.

BOND-MAN, the ſame with villain. See the article VILLAIN.

BONE, in anatomy, a hard, brittle, inſenſible part of the body, affording form and ſupport to the whole machine.

The doctrine of the bones makes a particular branch of anatomy, under the denomination of oſteology. See the article OSTEOLOGY.

The formation or geneſis of the bones, is called oſſification or oſteogony. See the article OSSIFICATION.

A ſyſtem of the ſeveral bones of a body, dried, whitened, and joined together in their natural order by art, is called a ſkeleton, and animals without bones are ſaid to be anoſtei; ſuch are all the ſpecies of reptiles, inſects, &c.

The integral or conſtituent parts of bones, are their perioſteum, or inveſting membrane, their ſubſtance, pores, marrow, glands, veſſels, &c.

The perioſteum hath two ſorts or ſeries of fibres; the under, derived from the *dura mater*; the upper, from the membrane of the muſcles that lies upon it; which fibres lie one upon the other, but are not interwoven one with the other: the under fibres run all parallel from one end of the bone to the other, and are continued from one bone to another, by means of the ligaments that join them together in their articulations, upon which they paſs. The outer hold the ſame courſe with the fibres of the muſcle, from whence they are derived, ſometimes ſtrait, ſometimes oblique, ſometimes

tranſverſe; and when they run ſo far as to make up their part of the perioſteum, it is thought they are inſerted into the bone, and are ſucceeded by others, from ſome other muſcles. The inner ſuperficies of the perioſteum, ſticks as cloſe to the bone as if it were glued to it; and beſides, the perioſteum has little *fibrillæ* or threads continued from it, that enter into the ſubſtance of the bone, which give them probably ſome internal ſenſe.

The uſes aſcribed to it are, 1. To be a tegument to the bones. 2. To convey ſpirits into the ſubſtance of the bones, for maintaining their heat, for preſerving their ſenſibility, and to aſſiſt in the work of their concretion and nutrition, by means of the minute fibres it emits into them. 3. To help to ſet limits to the growth and extenſion of the bones, as the bark is ſometimes obſerved to bind young trees ſo, that it is neceſſary to open it, before they can have the liberty of thriving. 4. It is ſerviceable in the conjunction of the bones, and their epiphyſes.

The ſubſtance of the bones is ſaid to conſiſt of lamellæ, or plates lying one upon the other; and conſiſt of ſmall ſtrings, running lengthways of the bones (like as we ſee in whale-bone) which ſtrings, tho' ſome of them run to the very extremities of the bones, and others approach near to them, do not terminate there, ſo as to have diſtinct ends; but they are, where they may be thought to terminate, ſtill continued, and run tranſverſly, and as it were, arch-wiſe; ſo that the ſtrings of one ſide of the bone proceed ſo as to meet and be united to thoſe that are propagated from the oppoſite; and this at both extremities; being a continuation, tho' not in the figure, yet in the manner of a ring; therefore they are not all of a length, but in every plate they fall one ſhorter than another.

In ſeveral bones, the lamellæ are diſpoſed diverſly. In thoſe bones which have a large cavity, they are on every ſide contiguous, and cloſely united: but in thoſe which have not any great cavity, but are altogether ſpungious within, many of the internal laminæ are placed at ſome diſtance one from another in all their lengths, having between them a cavernous ſubſtance, or ſmall bony cells; and ſo have all thoſe bones, containing a large cavity, ſome of thoſe cells at both their extremities.

In the bones whoſe plates are contiguous, there are pores thro' and between the plates, beſides thoſe which are made for the paſſage of the blood-veſſels; and theſe are of two ſorts, the one penetrate the laminæ, and are tranſverſe, looking from the cavity to the external ſuperficies of the bone. The ſecond ſort are formed between the plates, which are longitudinal and ſtrait, tending from one end of the bone towards the other, and obſerving the courſe of the bony ſtrings.

The firſt kind are formed not only in the firſt internal laminæ, but in every one, even to the outermoſt; though the nearer they are to the cavity, the greater is the number of the pores.

The ſecond kind, *viz.* the longitudinal, are not to be obſerved but by the help of good glaſſes; unleſs it be now and then in ſome particular bones: by theſe it is that the medullary oil diffuſes itſelf, and is immediately beneficial to the plates. The other, *viz.* the tranſverſe, are but ſubordinate to theſe, and rather deſigned for the paſſage of the marrow into them, than for the immediate communication of it to the ſubſtance of the bone.

The medulla, contained in the bones, conſiſts (beſides the blood-veſſels) of an inveſting membrane, in which are included membranaceous lobules, and bags; and in theſe bags veſiculæ, or glandulous bladders, very like the veſicular ſubſtance of the lungs. See the articles MARROW and MEDULLA.

Dr. Havers divides alſo the blood-veſſels of the bones into nutricious and medullary; the moſt conſiderable of the nutricious enter at the ends of the bone, *viz.* the artery at one end, and the veins at the other.

Some bones have long cavities in them, as the os humeri and femoris, the ulna and radius, tibia and fibula, *&c.* beſides theſe large cavities which are in the inſide of the bones, there are leſs cells or caverns in their ſubſtance, which are found in all bones, even thoſe which have a large cavity: beſides theſe, moſt have ſuperficial cavities, or ſinuſes, which are diſtinguiſhed into ſulci, or furrows, and the holes for the nutricious and medullary veſſels to enter by.

On the ſurface of the bones are obſerved two kinds of prominences, one of which is a continued part of the bone ſtanding apparently above its plain ſuperficies, for the more commodious inſertion of the muſcles, *&c.* called apophyſis, or proceſſus; the other an additional bone, growing

growing to another by mere continuity, being generally more ſoft and porous than the other, and called an epiphyſis, or appendage.

The bones are connected together various ways, according to the various purpoſes they are to ſerve, ſome being intended for motion, others for reſt, and the ſupport of the incumbent parts only.

The number of the bones is various in various ſubjects; ordinarily it is about two hundred and forty-two, ſome ſay three hundred, others three hundred and ſeven, others three hundred and eighteen, but the later writers fix it at two hundred and forty nine, or two hundred and fifty.

Wounds of the BONES. As blunt inſtruments uſually make fractures of the bones, ſo ſharp ones, ſuch as ſwords, ſpears, *&c.* do, properly ſpeaking, ſometimes wound them; and theſe wounds cannot be ſuffered, without a great variety of ſymptoms, which are often very dangerous, according to the ſize and depth of the wound, and the nature of the wounded part. Such ſlight wounds as do not penetrate deep into the bone, are often attended with no great danger, eſpecially if proper care be taken in the dreſſing of them, and the injured bone be as much as poſſible kept covered with its integuments, from the injuries of the external air. All fat and oily medicines muſt be wholly rejected in wounds of this kind, as great enemies to the bones. But when wounds of this kind penetrate deep, and wholly divide the bone and its adjacent parts, or violently affect any of the organs neceſſary to life, in the head, neck, back-bone, or breaſt, with a puncture or diviſion of the longer veins, arteries, nerves, and tendons of the upper and lower limbs, the danger is always great, the cure difficult, and death too often the conſequence.

Petit has adviſed, that in wounds of the bones, if the ſolution be inflicted lengthwiſe, the lips of the wound are to be cloſed and united by the uniting bandage; but if the wounds are very oblique, or wholly tranſverſe, then they are to be joined together by ſuture, and the eighteen-headed bandage; but this is certainly a wrong method in many caſes of this kind. Indeed, in the firſt kind of theſe wounds, and when they are very ſlight, as when the ſkull is not wholly, nor indeed very deeply penetrated, and that without contuſion, nor the brain much hurt, this method may do very well; but when the contrary of theſe mild ſymptoms are the caſe, a very different method of cure is to be attempted; the wound is to be kept open with lint, and not healed up till thoroughly cleanſed; for, by a too ſpeedy cloſure of ſuch wounds, the very worſt ſymptoms, and even death very often, are brought on.

So alſo, in ſlight, oblique, or tranſverſe wounds of the bones, the ſuture, or the eighteen-headed bandage, may be uſed with ſafety and ſucceſs; but theſe are ſeldom neceſſary; and in oblique wounds of the head, forehead, and cranium, if not violent ones, the parts may be much eaſier cloſed and retained by a common bandage and plaſter, than by ſutures with the needle, or the eighteen-headed bandage; but when the divided part hangs down, the ſuture may indeed be neceſſary.

If the bones of the fingers are thus wounded, or wholly divided by a ſword, they may be happily cured without the ſuture, by the following method. Firſt, accurately replace the divided bone, then ſecure it in its place, by winding round a ſlip of plaſter, and, over this, applying a compreſs dipped in ſpirit of wine, and laying over all little ſlips of paſteboard, by way of ſplints; then binding up the whole with a proper narrow bandage, and hanging the arm in a ſling from the neck. Once, in about three days, the dreſſing is to be removed, and the wound treated with a vulnerary eſſence, and in a month the cure will be perfected.

If either of the bones of the cubitus be divided, it uſually is the ulna, as that is moſt expoſed to the ſword in fighting. This caſe requires neither the ſuture nor eighteen-headed bandage; but the wound being cleanſed, is to be treated with ſome vulnerary eſſence or balſam, and with lint dipped in the ſame eſſence; after which are to be laid on, in order, the plaſter, compreſs, and paſteboard ſplints, wetted with ſpirit of wine, which are to be bound round the thick part of the cubitus near the wound, with a long bandage, that, as they dry, they may accommodate themſelves the better to the figure of the part; and, laſtly, the arm is to be ſuſpended in a ſling hung round the neck: after this, the wound is to be dreſſed every day, or every other day, in proportion to the diſcharge, and a cure without the help of the ſuture will be eaſily effected; the ſuture in ſuch caſes, being not only unneceſſary but pernicious. But if both bones

are divided, then indeed the eighteen-headed bandage may be neceſſary, and uſed with advantage; but, even in this caſe, the ſuture is much better let alone: for it is always to be avoided, except when perfectly neceſſary, from the dangers of inflammation, convulſions, and other bad ſymptoms that too naturally attend it.

If the thigh-bone, however, ſhould be cut with a ſword, in that caſe the bloody ſuture will be of ſervice, and is even neceſſary to cloſe and retain thoſe very ſtrong muſcles: the wound is, in this caſe, to be carefully treated, and the limb laid up in a caſe of ſtraw, as in other fractures: ſo alſo, if the bone of the humerus, or arm, ſhould be penetrated with a ſword, that wound alſo ſhould, for the ſame reaſon, be treated by the ſuture; but then it is not to be dreſſed with the eighteen-headed bandage, but with the common long and narrow bandage uſed in other fractures of the arm; the limb is afterwards to be ſupported by a ſhort napkin, faſtened about the neck, by which means the muſcles will be brought to a more ready union, and the cure ſooner perfected.

If it ſhould happen that both bones of the cubitus or leg ſhould be divided by a ſword, ſo as to leave the limb hanging only by the fleſh, ſkin, and blood veſſels, which is a caſe that very rarely happens, without wholly amputating the limb, then alſo the ſuture, with the eighteen-headed bandage, are the neceſſary applications; the ſuture, however, can be of no ſervice in a caſe of this kind, when the fleſh and blood-veſſels are divided, and the limb ſo far cut off, as to hang only by a ſkin, eſpecially when the part is ſo conſiderable as the leg or arm; for, in theſe caſes, the limb muſt be taken off, and the ſtump dreſſed as in other amputations.

When the lower jaw is ſo cut by a ſword, that the piece ſeparates, and cannot be otherwiſe retained, then alſo the ſuture may be uſed, adding a proper compreſs, plaſters, and the ſuitable bandage. If the clavicle, or acromion ſcapulæ, ſhould in like manner, be wounded by a ſword, the treatment and bandage are to be of the ſame kind, gently unbending, cleanſing and dreſſing the part either every day, or every other day, as the diſcharge ſhall require, till the cure is perfected.

No medicines ſo effectually prevent the corruption of bones laid bare, and aſſiſt to cover them ſo ſoon with fleſh, as ointments, balſams, and dreſſing ſeldom, to have the aſſiſtance of the moſt effectual balſam of all, *pus*. With theſe we ſee the extremities of amputated bones covered over with fleſh, part of the ſkull, tibia, and other ſolid bones, covered in a little time with granulated fleſh, after they had been laid quite bare by wounds made even with bruiſing inſtruments; and likewiſe after their carious ſurface had been cut off, and a complete cure made, without the leaſt exfoliation.

Other accidents to which the BONES *are liable*, are fractures, luxations, *&c.* See the articles FRACTURE, LUXATION, *&c.*

Diſeaſes of the BONES, are caries, exoſtoſes, fiſſures, nodes, tophi, rickets, *&c.* See CARIES, EXOSTOSIS, *&c.*

Foſſile or *petrified* BONES, thoſe found buried in different ſtrata, not excepting the hardeſt rocks, where they have undergone ſo great a change as to be converted into a ſtony ſubſtance. See the article PETRIFACTION.

Neper's BONES. See the article NEPER'S BONES.

BONE-ACE, an eaſy but licking game at cards, played thus: the dealer deals out two cards to the firſt hand, and turns up the third, and ſo on through all the players, who may be ſeven, eight, or as many as the cards will permit; he that has the higheſt card turned up to him, carries the bone, that is, one half of the ſtake, the other remaining to be played for: again, if there be three kings, three queens, three tens, *&c.* turned up, the eldeſt hand wins the bone: but it is to be obſerved, that the ace of diamonds is bone-ace, and wins all other cards whatever. Thus much for the bone; and as for the other half of the ſtake, the neareſt to thirty-one wins it, and he that turns up or draws thirty-one, wins it immediately.

BONGO, or BUNGO, the capital of one of the iſlands of Japan, to which it gives name: eaſt longitude 132°, and north latitude 32° 30′.

It is a ſea-port town, ſituated on the eaſt ſide of the iſland, oppoſite to the iſland of Tonſa, from which it is ſeparated by a narrow channel.

BONIFACIO, in geography, a port-town of Corſica, ſituated at its ſouth end, in 9° 20′ eaſt longitude, and 41° 20′ north latitude.

It is one of the beſt towns in the whole iſland, and gives name to the ſtreight between Corſica and Sardinia.

BONIS

BONIS NON AMOVENDIS, in law, is a writ directed to the ſheriffs of London, *&c.* charging them, that a perſon, againſt whom judgment is obtained, and proſecuting a writ of error, be not ſuffered to remove his goods until the error is determined.

BONITO, in ichthyology, a very beautiful fiſh, of the tunny-kind, with a broad gold coloured ſtreak running along the middle of each ſide from the gills to the tail. See the article SCOMBER.

BONNET, in a general ſenſe, denotes a cover for the head, in common uſe before the introduction of hats. See HAT. Bonnets are ſtill uſed in many parts of Scotland.

BONNET, in fortification, a ſmall work, conſiſting of two faces, having only a parapet with two rows of paliſadoes, of about ten or twelve feet diſtance: it is generally raiſed before the ſaliant angle of the counterſcarp, and has a communication with the covered way, by a trench cut through the glacis, and paliſadoes on each ſide.

BONNET A PRETRE, or *prieſt's* BONNET, in fortification, is an out-work, having at the head three ſaliant angles, and two inwards. It differs from the double tenaille only in this, that its ſides, inſtead of being parallel, are like the *queue d'aronde*, or ſwallow's tail, that is, narrowing, or drawing cloſe at the gorge, and opening at the head.

BONNET, in the ſea-language, denotes an addition to a ſail: thus they ſay, lace on the bonnet, or ſhake off the bonnet.

BONNEVILLE, a town of Savoy, ſituated on the north ſide of the river Arve, about twenty miles ſouth-eaſt of Geneva, in 6° 10′ eaſt longitude, and 46° 18′ north latitude.

BONNY, among miners, a bed of ore, differing only from a ſquat as being round, whereas the ſquat is flat. See the article SQUAT.

BONTIA, in botany, a genus of the didynamia-angioſpermia claſs of plants: the flower conſiſts of a ſingle petal, the upper lip of which is erect and emarginated, and the lower lip bent back; the fruit is a large drupe, of an oval figure, containing only a ſingle ſeed.

BONZES, indian prieſts, who, in order to diſtinguiſh themſelves from the laity, wear a chaplet round their necks, conſiſting of an hundred beads, and carry a ſtaff, at the end of which is a wooden bird; they live upon the alms of the people, and yet are very charitably diſpoſed, maintaining ſeveral orphans and widows out of their own collections. The tonquineſe have a pagod, or temple, in each town, and every pagod has at leaſt two bonzes belonging to it; ſome have thirty or forty. The bonzes of China are the prieſts of the fohiſts, or ſects of Fohi; and it is one of their eſtabliſhed tenets, that there are rewards allotted for the righteous, and puniſhments for the wicked, in the other world; and that there are various manſions, in which the ſouls of men will reſide, according to their different degrees of merit. The bonzes of Pegu are, generally, gentlemen of the higheſt extraction.

BOOK, *liber*, the compoſition of a man of wit or learning, deſigned to communicate ſomewhat he has invented, experienced, or collected, to the public, and thence to poſterity; being withal of a competent length to make a volume.

In this ſenſe, a book is diſtinguiſhed from a pamphlet, by its greater length; and from a tome or volume, by its containing the whole writing. According to the antients, a book differed from an epiſtle, not only in bulk, but in that the latter was folded, and the former rolled up; not but that there are divers antient books now extant, under the names of epiſtles.

Origin of BOOKS. We have nothing that is clear on that ſubject. The books of Moſes are doubtleſs the oldeſt books now extant; but there were books before thoſe of Moſes, ſince he cites ſeveral. Scipio Sgambati, and others, even talk of books before the deluge, written by the patriarchs Adam, Seth, Enos, Cainan, Enoch, Methuſalem, Lamech, Noah and his wife; alſo by Ham, Japhet and his wife; beſides others by dæmons or angels; of all which ſome moderns have found enough to fill an antediluvian library; but they appear all either the dreams of idle writers, or the impoſtures of fraudulent ones. A book of Enoch is even cited in the Epiſtle of Jude, ver. 10 and 15. from which ſome endeavour to prove the reality of the antediluvian writings; but the book cited by that apoſtle is generally allowed, both by antient and modern writers, to be ſpurious.

Of

Of profane books, the oldeſt extant are Homer's poems, which were ſo even in the time of Sixtus Empiricus; though we find mention in greek writers of ſeventy others prior to Homer, as Hermes, Orpheus, Daphne, Horus, Linus, Muſæus, Palamedes, Zoroaſter, &c. but of the greater part of theſe there is not the leaſt fragment remaining; and of others, the pieces which go under their names are generally held, by the learned, to be ſuppoſititious. F. Hardouin goes farther, charging all the antient books, both greek and latin, except Cicero, Pliny, Virgil's Georgics, Horace's Satires and Epiſtles, Herodotus, and Homer, to be ſpurious, and forged in the XIIIth century, by a club of perſons, under the direction of one Severus Arcontius. Among the Greeks, it is to be obſerved, the oldeſt books were in verſe, which was prior to proſe: Herodotus's Hiſtory is the oldeſt book extant of the proſaic kind.

Materials of BOOKS. Several ſorts of materials were uſed formerly in making books: plates of lead, and copper, the barks of trees, bricks, ſtone, and wood were the firſt materials employed to engrave ſuch things upon, as men were willing to have tranſmitted to poſterity. Joſephus ſpeaks of two columns, the one of ſtone, the other of brick, on which the children of Seth wrote their inventions and aſtronomical diſcoveries: Porphyry makes mention of ſome pillars, preſerved in Crete, on which the ceremonies, practiſed by the Corybantes in their ſacrifices, were recorded: Heſiod's works were originally written upon tables of lead, and depoſited in the temple of the Muſes, in Bœotia: the ten commandments, delivered to Moſes, were written upon ſtone; and Solon's laws, upon wooden planks. Tables of wood, box, and ivory, were common among the antients: when of wood, they were frequently covered with wax, that people might write on them with more eaſe, or blot out what they had written. The leaves of the palm-tree were afterwards uſed inſtead of wooden planks, and the fineſt and thinneſt part of the bark of ſuch trees, as the lime, the aſh, the mapple, and the elm; from hence comes the word *liber*, which ſignifies the inner bark of the trees; and as theſe barks were rolled up, in order to be removed with greater eaſe, theſe rolls were called *volumen*, a volume; a name afterwards given to the like rolls of paper, or parchment.

Thus we find books were firſt written on ſtones; witneſs the decalogue given to Moſes: then on the parts of plants, as leaves chiefly of the palm-tree; the rind and bark, eſpecially of the tilia, or phillyrea, and the egyptian papyrus. By degrees wax, then leather, were introduced, eſpecially the ſkins of goats and ſheep, of which at length parchment was prepared: then lead came into uſe; alſo linen, ſilk, horn, and, laſtly, paper itſelf.

Form of BOOKS. The firſt books were in the form of blocks and tables: but as flexible matter came to be wrote on, they found it more convenient to make their books in the form of rolls: theſe were compoſed of ſeveral ſheets, faſtened to each other, and rolled upon a ſtick, or *umbilicus*; the whole making a kind of column, or cylinder, which was to be managed by the umbilicus as a handle, it being reputed a crime to take hold of the roll itſelf: the outſide of the volume was called *frons*; the ends of the umbilicus, *cornua*, horns, which were uſually carved, and adorned with ſilver, ivory, or even gold and precious ſtones: the title, σίλλαβος, was ſtruck on the outſide; the whole volume, when extended, might make a yard and a half wide, and fifty long. The form which obtains among us is the ſquare, compoſed of ſeparate leaves; which was alſo known, though little uſed, by the antients.

To the form of books belongs alſo the internal œconomy, as the order and arrangement of points and letters into lines and pages, with margins and other appurtenances: this has undergone many varieties; at firſt the letters were only divided into lines, then into ſeparate words, which, by degrees, were noted with accents, and diſtributed, by points and ſtops, into periods, paragraphs, chapters, and other diviſions. In ſome countries, as among the orientals, the lines began from the right and ran leftward; in others, as the northern and weſtern nations, from left to right; others, as the Greeks, followed both directions, alternately going in the one, and returning in the other, called *bouſtrophedon*: in moſt countries the lines run from one ſide to the other: in ſome, particularly the Chineſe, from top to bottom. Again, in ſome the page is entire and uniform, in others, divided into columns; in others, diſtin-

diſtinguiſhed into text and notes, either marginal, or at the bottom; uſually it is furniſhed with ſignatures, and catch-words; ſometimes alſo with a regiſter, to diſcover whether the book is complete. To theſe are added the apparatus of ſummaries or ſide-notes, the embelliſhments of red, gold, or initial letters, head-pieces, tail-pieces, effigies, ſchemes, maps, and the like. The end of the book, now denoted by FINIS, was antiently marked with this character ▽, called *cornis*: there alſo occur certain formulas at the beginnings and endings of books; the one to exhort the reader to be courageous, and proceed to the following books; the others were concluſions, often guarded with imprecations againſt ſuch as ſhould falſify them.

Uſes of BOOKS. It is certain, that books make one of the chief inſtruments of acquiring knowledge; they are the repoſitories of the law, and vehicles of learning of every kind; our religion itſelf is founded on books, and without them, ſays Bartholin, God is ſilent, juſtice dormant, phyſic at a ſtand, philoſophy lame, letters dumb, and all things involved in cimmerian darkneſs. The eulogia which have been beſtowed upon books are infinite; they are repreſented as the refuge of truth, which is baniſhed out of converſation: as ſtanding counſellors and preachers, always at hand, and always diſintereſted; having this advantage over all inſtructions, that they are ready to repeat their leſſon as often as we pleaſe. Books ſupply the want of maſters, and even, in ſome meaſure, the want of genius and invention, and can raiſe the dulleſt perſons, who have memory, above the level of the greateſt geniuſes, if deſtitute of their help. Perhaps their greateſt glory is the affection borne them by many of the greateſt men of all ages. M. Cato, the elder Pliny, the emperor Julian, and others, are on record for their great devotion to books: the laſt has perpetuated his paſſion by ſome Greek epigrams in their praiſe. Richard Bury, biſhop of Durham, and lord-chancellor of England, has an expreſs treatiſe on the love of books.

Bad effects objected to BOOKS. On the other hand it is ſaid, that they employ too much of our time and attention, engage us in purſuits of no uſe to the commonwealth, and indiſpoſe us for the functions of civil life; that they render many lazy, and prevent their exerting their own talents, by furniſhing them, on every occaſion, with things of the growth of others; and that our natural lights become weakened and extinguiſhed by inuring ourſelves only to ſee with foreign lights: beſides, that all men are thereby furniſhed with means of impoſing on the people, and propagating ſuperſtition, immorality, enthuſiaſm, or irreligion, which will always ſpread faſter, and be received more greedily than leſſons of truth and virtue.

Art of writing or compoſing BOOKS. To this end we have much fewer helps and inſtructions, than for the art of ſpeaking; though the former be the more difficult of the two, as a reader is not ſo eaſy to be impoſed on, but has better opportunities of detecting frauds than a hearer. A great cardinal, indeed, reduces an author's buſineſs to a few heads, were they but as eaſily practiſed as preſcribed: let him conſider who it is writes, what, how, why, and to whom. To write a good book, an intereſting ſubject muſt be choſen, which is to be long and cloſely meditated on; and of the ſentiments that offer themſelves, thoſe which are already commonly known are to be rejected; few or no digreſſions from the main point are to be allowed; quotations rarely made, and then only to prove ſome important truth, or embelliſh the ſubject with ſome beautiful and uncommon obſervations, never bringing an antient philoſopher on the ſtage, to ſay what the meaneſt lacquey could have ſaid as well; nor making a ſermon, unleſs the buſineſs be to preach.

Marks of good BOOKS. Theſe are, according to Selden, ſolidity, perſpicuity, and brevity. The firſt will be attained by keeping the piece long by us, often reviewing and correcting it, by the advice of friends: the ſecond, by diſpoſing the ſentiments in a due order, and delivering them under proper and uſual expreſſions: the third, by rejecting every thing that does not immediately concern the ſubject.

To judge of a BOOK. Thoſe who have treated of the ſubject, direct us to obſerve the title, the author's or editor's name, the number of editions, the place where, and the year when it was printed; proceed then to the preface, and look for the author's deſign, and the occaſion of his writing; conſider alſo his country (each nation having its peculiar genius) and the perſon by whoſe order he wrote; if his life be annexed to it, run it over, and note his

his profeſſion, and what rank he was of, what is remarkable in his education, ſtudies, converſation, &c. If the preface does not give an account of the method of the work, run briefly over the order and diſpoſition of it, and note what points the author has handled.

Foreign BOOKS. All foreign bound books pay duty on importation 14 s. for every 112 lb. As to unbound books, they are commonly entered by the hundred weight, and pay, if French, 13 s. $6\frac{44}{100}$ d. but if from any other country, only 7 s. $7\frac{20}{100}$ d. It is alſo to be obſerved, that all popiſh books are prohibited to be imported; as are all engliſh books printed abroad, unleſs with the conſent of the proprietor of the copy.

Common-place BOOK. See COMMON-PLACE BOOK.

Text-BOOK. See the article TEXT.

BOOKS, in a mercantile ſenſe, the ſeveral regiſters wherein merchants and other dealers keep their accounts.

Merchants books are kept either ſingle, or according to the method of double entry. They who keep them in the former method, have occaſion for few books, as a journal, or day-book; and a ledger, or poſt book: the former to write all the articles following each other as they occur in the courſe of their buſineſs; and the other to draw out the accounts of all the debtors and creditors on the journal. This method is only proper for retail dealers, or at leaſt for traders who have but very little buſineſs: but as for wholeſale dealers and great merchants, who keep their books according to the double entry, or italian method, as is now moſt commonly done, their buſineſs requires ſeveral other books, the uſefulneſs of which will be ſeen from what follows.

The moſt conſiderable books, according to the method of double entry, are the waſte-book, the journal, and the ledger; but beſides theſe three, which are abſolutely neceſſary, there are ſeveral others, to the number of thirteen, or even more, called ſubſervient or auxiliary books, which are uſed in proportion to the buſineſs a man has, or to the nature of the buſineſs a man carries on. Theſe books are the caſh-book, the debt-book, the book of numeros, the book of invoices, the book of accounts current, the book of commiſſions, orders, or advices, &c.

The waſte-BOOK may be defined a regiſter, containing an inventory of a merchant's effects, and debts, with a diſtinct record of all his tranſactions and dealings, in a way of trade, related in a plain ſimple ſtile, and in order of time as they ſucceed one another.

The waſte-book opens with the inventory, which conſiſts of two parts; firſt, the effects, that is, the money a merchant has by him, the goods he has in hand, his part of ſhips, houſes, farms, &c. with the debts due to him; the ſecond part of the inventory is the debts due by him to others: the difference between which, and the effects, is what the merchants call neat ſtock. When a man begins the world, and firſt ſets up to trade, the inventory is to be gathered from a ſurvey of the particulars that make up his real eſtate; but ever after is to be collected from the ballance of his old books, and carried to the new.

After the inventory is fairly related in the waſte-book, the tranſactions of trade come next to be entered down; which is a daily taſk to be performed as they occur. The narrative ought to exhibit tranſactions with all the circumſtances neceſſary to be known, and no more. It ſhould contain the names of perſons with whom the merchant deals upon truſt, the conditions of bargains, the terms of payment, the quantity, quality, and prices of goods, with every thing that ſerves to make the record diſtinct, and nothing elſe. The waſte-book, if no ſubſidiary books are kept, ſhould contain a record of all the merchant's tranſactions and dealings in a way of trade; and that not only of ſuch as are properly and purely mercantile, but of every occurrence that affects his ſtock, ſo as to impair or increaſe it, ſuch as private expences, ſervants fees, houſe-rents, money gained, &c.

The journal, or day-BOOK, is the book wherein the tranſactions recorded in the waſte-book are prepared to be carried to the ledger, by having their proper debtors and creditors aſcertained and pointed out: whence it may be obſerved, that the great deſign of the journal is to prevent errors in the ledger: again, after the ledger is filled up, the journal facilitates the work required in reviſing and correcting it; for firſt the waſte-book and journal are compared, and then the journal and ledger; whereas to reviſe the ledger immediately from the waſte-book, would be a matter of no leſs difficulty, than to form it without the help of a journal: laſtly, the jour-

journal is designed as a fair record of a merchant's business, for neither of the other two books can serve this purpose; not the ledger, by reason of the order that obtains in it, and also on account of its brevity, being little more than a large index: nor can the waste-book answer this design, as it can neither be fair nor uniform, nor very accurate, being commonly written by different hands, and in time of business. Hence it is, that in case of differences between a merchant and his dealers, the journal is the book commonly called for, and inspected by a civil judge.

In the journal, persons and things are charged debtors to other persons and things as creditors; and in this it agrees with the ledger, where the same stile is used, but differs from it as to forms and order; so that it agrees with the waste-book in those very things where it differs from the ledger; and on the other hand, it agrees with the latter, in the very point wherein it differs from the former: but in order to state the comparison betwixt the waste-book and journal, we shall turn two or three examples of the waste-book into a journal form.

WASTE-BOOK.

		l.	s.	d.
July 1st.				
Bought of William Pope 40 yards of black cloth, at 14 s. per yard, payable in three months,		28	00	00
Bought of James Sloan 100 yards of shalloon, at 10 d. per yard.	l. s. d.			
Whereof paid,	02 00 00			
Rest due, at two months,	02 03 04			
		4	03	04
4th.				
Sold William Pope four pipes of port wine, at 27 l. 10 s. per pipe.	l. s. d.			
Whereof received,	55 00 00			
Rest due, on demand,	55 00 00			
		110	00	00

JOURNAL.

		l.	s.	d.
July 1st.				
Black cloth Dr. to William Pope, 28 l. For 40 yards, at 14 s. per yard, payable in three months,		28	00	00
Shalloon Dr. to sundries, 4 l. 3 s. 4 d.	l. s. d.			
To Cash paid in part for 100 yards, at 10 d. per yard,	02 00 00			
To J. Sloan, for the rest, due at two months,	02 03 04			
		4	03	04
4th.				
Sundries Drs. to port wine, 110 l.	l. s. d.			
Cash, received in part for four pipes, at 27 l. 10 s. per pipe,	55 00 00			
William Pope, for the rest on demand,	55 00 00			
		110	00	00

It may be here observed, that every case or example of the waste-book, when entered into the journal, is called a journal post, or entrance; thus the examples above, make three direct posts. Again, a post is either simple or complex: a simple post, is that which has but one debtor, and one creditor, as the first of these above; a complex post, is either when one debtor is ballanced by one or more creditors, as in the second post; or when two or more debtors are ballanced

lanced by one creditor, as in the third poſt; or when ſeveral debtors are balanced by ſeveral creditors; and then the poſt is ſaid to be complex in both terms. This being premiſed, the following rules are to be obſerved for writing in the journal.

1. In a ſimple poſt, the debtor is to be expreſsly mentioned, then the creditor, and laſtly the ſum, all in one line; after which, the narrative, or reaſon of the entry, in one or more lines, as in the firſt of theſe three poſts above.

2. In a complex poſt, the ſeveral debtors, or creditors, are expreſſed in the firſt line, by themſelves, with their reſpective ſums ſubjoined to them, which are to be added up, and their total carried to the money columns, as in the ſecond and third poſts.

3. The debtors and creditors ſhould be written in a large letter, or text hand, both for ornament and diſtinction.

Before we proceed to explain the ledger, we ſhall previouſly inquire into the nature and uſe of the terms debtor and creditor, as the whole art of book-keeping entirely depends on a true idea of thoſe terms, the nature and uſe of which will be obvious from the following conſiderations.

Accounts in the ledger conſiſt of two parts, which in their own nature are directly oppoſed to, and the reverſe of one another, which are therefore ſet fronting one another, and on oppoſite ſides of the ſame folio. Thus all the articles of the money received, go to the left ſide of the caſh account; and all the articles or ſums laid out, are carried to the right. In like manner, the purchaſe of goods is poſted to the left ſide of the accounts of the ſaid goods, and the ſale or diſpoſal of them to the right.

Tranſactions of trade or caſes of the waſte-book, are alſo made up of two parts, which belong to different accounts, and to oppoſite ſides of the ledger, *e.g.* If goods are bought for ready money, the two parts are the goods received, and the money delivered; the former of which goes to the left ſide of the account of the ſaid goods, and the latter to the right ſide of the caſh account.

The two parts in any caſe in the waſte-book, when poſted to the journal, are denominated the one the debtor, the other the creditor of that poſt; and when carried from thence to the ledger, the debtor, or debtor part, is entered upon the left ſide (hence called the debtor ſide) of its own account, where it is charged debtor to the creditor part: again, the creditor, or creditor part, is poſted to the right ſide or creditor ſide of its account, and made creditor by the debtor part. Hence italian book-keeping is ſaid to be a method of keeping accounts by double entry, becauſe every ſingle caſe of the waſte-book, requires at leaſt two entrances in the ledger, *viz.* one for the debtor, and another for the creditor.

From what has been ſaid, it is evident that the terms debtor and creditor, are nothing elſe but marks or characteriſtics ſtamped upon the different parts of tranſactions in the journal, expreſſing the relation of theſe parts to one another, and ſhewing to which ſide of their reſpective accounts in the ledger they are to be carried.

Having thus far explained the meaning of the terms debtor and creditor, we ſhall now proceed to the ledger, or principal book of accounts.

Of the ledger. The ledger is the principal book wherein all the ſeveral articles of each particular account, that lie ſcattered in other books, according to their dates, are collected, and placed together in ſpaces allotted for them, in ſuch a manner, that the oppoſite parts of every account, are directly ſet fronting one another, on oppoſite ſides of the ſame folio.

The ledger's folios are divided into ſpaces for containing the accounts, on the head of which are written the titles of the accounts, marked Dr. on the left hand page, and Cr. on the right: below which ſtand the articles, with the word *To* prefixed on the Dr. ſide, and the word *By* on the Cr. ſide; and upon the margin are recorded the dates of the articles, in two ſmall columns allotted for that purpoſe. The money columns are the ſame as in other books: before them ſtand the folio column, which contains figures, directing to the folio where the correſponding ledger-entrance of each article is made; for every thing is twice entered in the ledger, *viz.* on the Dr. ſide of one account, and again on the Cr. ſide of ſome other account; ſo that the figures mutually refer from the one to the other, and are of uſe in examining the ledger. Beſides theſe columns, there muſt be kept in all accounts, where number, meaſure, weight, or diſtinction of coins is conſider-

ed,

ed, inner columns, to inſert the quantity; and for the ready finding any account in the ledger, it has an alphabet, or index, wherein are written the titles of all accounts, with the number of the folio where they ſtand.

How the ledger is filled up from the journal.

1. Turn to the index, and ſee whether the Dr. of the journal-poſt, to be tranſported, be written there; if not, inſert it under its proper letter, with the number of the folio to which it is to be carried.

2. Having diſtinguiſhed the Dr. and the Cr. ſides, as already directed, recording the dates, complete the entry in one line, by giving a ſhort hint of the nature and terms of the tranſaction, carrying the ſum to the money columns, and inſerting the quantity, if it be an account of goods, *&c.* in the inner columns, and the referring figure in the folio column.

3. Turn next to the Cr. of the journal-poſt, and proceed in the ſame manner with it, both in the index and ledger; with this difference only, that the entry is to be made on the Cr. ſide, and the word *By* prefixed to it.

4. The poſt being thus entered in the ledger, return to the journal, and on the margin mark the folios of the accounts, with the folio of the Dr. above, and the folio of the Cr. below, and a ſmall line between them thus $\frac{2}{4}$. Theſe marginal numbers of the journal, are a kind of index to the ledger, and are of uſe in examining the books, and on other occaſions.

5. In opening the accounts in the ledger, follow the order of the journal; that is, beginning with the firſt journal-poſt, allow the firſt ſpace in the ledger for the Dr. of it, the next for the Cr. the third for the Dr. of the following poſt, if it be not the ſame with ſome of thoſe already opened, and ſo on till the whole journal be tranſported; and ſuppoſing that, thro' inadvertency, ſome former ſpace has been allowed too large, you are not to go back to ſubdivide it, in order to erect another account in it.

Tho' theſe rules are formed for ſimple poſts, where there is but one Dr. and one Cr. yet they may be eaſily applied to complex ones.

As examples, how articles are to be entered in the ledger, take the two accounts of CASH and WILLIAM POPE, ſo far as mentioned in the above waſte-book and journal.

1751		CASH Dr.	Fo.	l.	s.	d.
July	4	To port-wine, received in part for four pipes, at 27 l. 10 s. per pipe,	6	55	00	00

		WIL. POPE Dr.				
July	4	To port-wine, as per journal,	6	55	00	00

1751		CONTRA Cr.	Fo.	l.	s.	d.
July	1	By ſhalloon, paid in part for 100 yards, at 10 d. per yard,	12	2	00	00

		CONTRA Cr.				
July	1	By black cloth, for 40 yards, at 14 s. per yard,	3	28	00	00

Caſh-BOOK. This is the moſt important of the auxiliary books. It is ſo called, becauſe it contains, in debtor and creditor, all the caſh that comes in, and goes out of a merchant's ſtock. The receipts on the debtor's ſide; the perſons of whom it was received, on what, and on whoſe account, and in what ſpecie; and the payments, on the creditor's ſide; mentioning alſo the ſpecie, the reaſons of the payments, to whom, and for what account they are made.

BOOK *of debts, or payments*, is a book in which is written down the day on which all ſums become due, either to be received or paid, by bills of exchange, notes of hand, merchandizes bought or ſold, or otherwiſe. By comparing receipts and payments, one may, in time, provide the neceſſary funds for payments, by getting the bills, notes, *&c.* due to be paid, or by taking other precautions.

BOOK *of numero's, or wares.* This book is kept in order, to know eaſily all the

merchandizes that are lodged in the warehouſe, thoſe that are taken out of it, and thoſe that remain therein.

BOOK *of invoices*. This book is kept to preſerve the journal from eraſures, which are unavoidable in drawing up the accounts of invoices of the ſeveral merchandizes received, ſent out, or ſold; wherein one is obliged to enter very minute particulars. It is alſo deſigned to render thoſe invoices eaſier to find than they can be in the waſte-book, or journal.

BOOK *of accounts current*. This book ſerves to draw up the accounts which are to be ſent to correſpondents, in order to ſettle them in concert, before they are ballanced in the ledger; it is properly a duplicate of the accounts current, which is kept to have recourſe to occaſionally.

The other mercantile books generally in uſe are, the book of commiſſions, orders, or advices; the book of acceptances of bills of exchange; the book of remittances; the book of expences; the copy-book of letters; the book of poſtage; the ſhip-books, and the book of workmen. To theſe may be added others, which depend on the greater or leſſer accuracy of the merchants and bankers, and on the ſeveral kinds of trade carried on by particular dealers.

BOOK-BINDING, the art of gathering and ſewing together the ſheets of a book, and covering it with a back, *&c.* It is performed thus: the leaves are firſt folded with a folding-ſtick, and laid over each other in the order of the ſignature; then beaten on a ſtone with a hammer, to make them ſmooth, and open well, and afterwards preſſed. While in the preſs they are ſewed upon bands, which are pieces of cord or packthread; ſix bands to a folio book, five to a quarto, octavo, *&c.* which is done by drawing a thread thro' the middle of each ſheet, and giving it a turn round each band, beginning with the firſt, and proceeding to the laſt. After this the books are glued, and the bands open and ſcraped, for the better fixing the paſte-boards; the back is turned with a hammer, and the book fixed in a preſs between two boards, in in order to make a groove for fixing the paſte-boards; theſe being applied, holes are made for fixing them to the book, which is preſſed a third time. Then the book is at laſt put to the cutting-preſs, betwixt two boards, the one lying even with the preſs, for the knife to run upon, the other above it, for the knife to run againſt: after which the paſte-boards are ſquared.

The next operation is the ſprinkling the leaves of the book, which is done by dipping a bruſh into vermilion and ſap-green, holding the bruſh in one hand, and ſpreading the hair with the other; by which motion the edges of the leaves are ſprinkled in a regular manner, without any ſpots being bigger than the others.

Then remains the covers, which are either of calf-ſkin, or of ſheep ſkin; theſe being moiſtened in water, are cut out to the ſize of the book, then ſmeared over with paſte, made of wheat flour, and afterwards ſtretched over the paſte-board, on the outſide, and doubled over the edges withinſide; after having firſt taken off the four angles, and indented and platted the cover at the head-band: which done, the book is covered, and bound firmly between two bands, and then ſet to dry. Afterwards it is waſhed over with a little paſte and water, and then ſprinkled fine with a bruſh, unleſs it ſhould be marbled; when the ſpots are to be made larger, by mixing the ink with vitriol. After this the book is glazed twice, with the white of an egg beaten, and at laſt poliſhed with a poliſhing-iron paſſed hot over the glazed cover.

BOOK-KEEPING, an art teaching how to record and diſpoſe the accounts of buſineſs, ſo as the true ſtate of every part, and of the whole, may be eaſily and diſtinctly known. See the article BOOKS, in a mercantile ſenſe.

BOOKSELLER, one who trades in books, whether he prints them himſelf, or gives them to be printed by others.

Bookſellers are in many places ranked among the members of univerſities, and entitled to the privilege of ſtudents, as at Tubingen, Saliſburg, and Paris, where they have always been diſtinguiſhed from the vulgar and mechanical traders, and exempted from divers taxes and impoſitions laid upon other companies.

The traffic of books was antiently very inconſiderable, in ſo much, that the book-merchants both of England, France, and Spain, and other countries, were diſtinguiſhed by the appellation of ſtationers, as having no ſhops, but only ſtalls and ſtands in the ſtreets. During this ſtate, the

the civil magiſtrates took little notice of the bookſellers, leaving the government of them to the univerſities, to whom they were ſuppoſed more immediate retainers; who accordingly gave them laws and regulations, fixed prices on their books, examined their correctneſs, and puniſhed them at diſcretion.

But when, by the invention of printing, books and bookſellers began to multiply, it became a matter of more conſequence, and the ſovereigns took the direction of them into their own hands; giving them new ſtatutes, appointing officers to fix prices, and grant licences, privileges, &c.

Authors frequently complain of the arts of bookſellers. Lord Shaftſbury gives us the proceſs of a literary controverſy blown up by bookſellers. The publication of books depend much on the taſte and diſpoſition of bookſellers.

Among the german writers, we find perpetual complaints of the difficulty of procuring bookſellers: many are forced to travel to the book fairs at Frankfort or Leipſic, to find bookſellers to undertake the impreſſion of their works.

BOOKING, among merchants, the making an entry of any thing in a journal. See the articles BOOK and JOURNAL.

BOOM, in the ſea-language, a long piece of timber with which the clue of the ſtudding-ſail is ſpread out; and ſometimes the boom is uſed to ſpread or boom out the clue of the mainmaſt.

Boom-ſpars, imported from the britiſh plantations, are free; if from Ireland, Aſia, or Africa, they pay 6 s. 5 d. the hundred; and if from elſewhere, 9 s. 6½ d.

BOOM denotes alſo a cable ſtretched athwart the mouth of a river or harbour; with yards, top-maſts, battling or ſpars of wood laſhed to it, to prevent an enemy's coming in.

BOOMING, among ſailors, denotes the application of a boom to the ſails.

A ſhip is ſaid to come booming forwards, when ſhe comes with all the ſail ſhe can make.

BOOPHTHALMUS, a kind of agat with large circles in it, bearing ſome reſemblance to an ox's eye, from whence it has got this name.

BOOPS, in ichthyology, the ſparus, with four parallel, longitudinal, gold and ſilver-coloured lines on each ſide.

It is a large and beautiful fiſh, eſpecially its eyes; from whence it has got the name of boops. There are nineteen rays in the pinna ani, and the pectoral fins are red. See plate XXIX. fig. 3. and the article SPARUS.

BOOT, a well-known cover for the leg, made of leather.

Hunting boots are made of thinner leather than ordinary, as the fiſhing ones are of a ſtrong thick kind, fit to hold out water.

Jack-BOOTS, a very ſtrong kind, worn by troopers.

BOOT-TREE, or BOOT-LAST, an inſtrument uſed by ſhoe-makers to widen the leg of a boot. It is a wooden cylinder ſlit into two parts, between which, when it is put into the boot, they drive by main force a wedge or quoin.

BOOTES, a conſtellation of the northern hemiſphere, conſiſting of 23 ſtars, according to Ptolemy's catalogue, of 28 in Tycho's, of 34 in Bayer's, of 52 in Hevelius's, and of 45 in Mr. Flamſtead's catalogue.

BOOTY, whatever is taken from an enemy in time of war. By the law of Moſes, the booty taken from the enemy, was to be divided equally between thoſe who were in the battle and the reſt of the people. And Moſes adds, "Ye ſhall "likewiſe ſeparate the Lord's ſhare, "which ye ſhall take out of the whole "booty belonging to the men of war." The rabbins pretend, that under the kings of Iſrael, another rule was followed in the diſtribution of the ſpoil. 1. Every thing was given to the king which belonged to the conquered king, his tent, ſlaves, cattle, &c. After this the reſt of the booty was divided into two equal parts, of which the king had one moiety, and the other was diſtributed among the ſoldiers who were in the action, and thoſe who continued in the camp.

Among the Greeks, the booty was divided equally, a ſhare being reſerved for their gods. By the military diſcipline of the Romans, the booty belonged to the republic, and the generals ordered it all to be carried to the public treaſury. Sometimes, indeed, it was diſtributed among the ſoldiers, as a reward of their bravery, and in order to animate them in future actions.

BOPPART, a town of the electorate of Triers, ſituated on the weſt ſhore of the Rhine, about eight miles ſouth of Coblentz: eaſt longitude 7° 10′, north latitude 50° 20′.

BOQUINIANS, in church-hiſtory, a ſect of heretics,

hereties, ſo called from Boquinus their founder, who taught that Chriſt did not die for all mankind, but only for the faithful, and conſequently was only a particular ſaviour.

BORAK, a fabulous animal, ſaid to be of a middle nature between an aſs and a mule, and to have carried Mahomet in his aerial journies from Jeruſalem into heaven.

BORASSUS, in botany, a genus of plants, the characters of which are not ſo well aſcertained as to reduce it to any claſs. The male flowers have the corolla divided into three oval hollow ſegments reſembling petals; and the female flowers have it divided into three round ſmall permanent ſegments. The fruit is a roundiſh, obtuſe, rigid, unilocular berry, containing three oval, compreſſed, diſtinct and filamentoſe ſeeds.

BORAX, in natural hiſtory, a native ſalt found in a fluid form, ſuſpended in certain waters, and diſcovered in them by a ſweetiſh mixed with a brackiſh and bitter taſte; readily ſeparable from them by evaporation, and appearing, when ſeparated, in a ſolid, bright, and tranſparent form, and in large, regularly figured bodies, affording, on a nice ſolution and evaporation, octohaedral cryſtals.

In ſeveral parts of the dominions of the great Mogul, in Perſia, and in ſome parts of Tartary, and other places in the eaſt, there ouzes out of the ſides of hills, which contain metals, and particularly copper, a thick turbid water, of a bluiſh grey colour, and of a brackiſh bitter, and very diſagreeable taſte. This, where it runs in ſufficient quantity, is generally taken care of for uſe, being directed in its courſe into wide and ſhallow pits, lined with a ſtiff clay: in theſe it is left expoſed to the ſun, in order to evaporate; but the people who have the care of it, daily mix among it, the grey fine mud left in its paſſage; and when it is brought to the conſiſtence of a ſoft pap, they throw into it, in the middle of a hot day, a large quantity of ſome animal fat melted over the fire. This is all well ſtired together, and then covered with ſticks and branches of trees; and over theſe is thrown a cruſt of any common clay. Thus it is left till perfectly dried up; then the covering is taken off, and the whole ſifted to ſeparate the earth and dirt, and in the ſieves is found, what is ſent to us under the name of rough borax; which is in rude irregular maſſes, but ſomewhat approaching to a priſmatic figure, very foul, earthy and fattiſh, of a duſky greeniſh colour, and having a particularly rank and diſagreeable ſmell.

This is afterwards refined for uſe, by diſſolving it ſeveral times in large quantities, and cryſtalizing it while the liquor is hot and kept cloſe covered from the air; and finally, being diſſolved in a lixivium of quick-lime and potaſhes, and cryſtalized in the ſame manner, it is what we call refined borax.

It requires two and twenty times its own weight of water to diſſolve it perfectly. Expoſed to the fire, it ſwells and bliſters, and after it has ſtood on the fire ſome time, ſubſides into a fine white gloſſy ſubſtance, which is with difficulty ſoluble in water. It vitrifies all earths and ſtones mixed with it, and expoſed to a proper degree of heat; and is of great uſe in ſoldering metals, particularly gold. The antients uſed for this laſt purpoſe, a green arenaceous ſubſtance, which, from its uſe, they called *chryſocolla*, or gold ſolder; and the moderns have from this ſimilar uſe of borax, called it by the ſame name. See the article CHRYSOCOLLA.

Borax makes no effervеſcence either with acids or alkalies, and yields nothing by diſtillation but an inſipid phlegm. Its uſe in ſoldering of gold and other metals, is well known; alſo in metallurgy, as a flux; in the remelting the ſmall maſſes of gold and ſilver that are the produce of aſſays: for by rubbing it over the veſſels theſe are to be melted in, it fills up all their little cavities, and leaves not the leaſt roughneſs on the ſurface, to detain any of the melted metal: it is uſed by the dyers alſo, to give a gloſs to ſilks; and, in Italy, the ladies uſe it as a coſmetic: with us, it is in no ſmall repute as a promoter of the menſes and delivery; the powder, kept as a ſecret by ſome of our women midwives, being a compoſition whereof borax is the baſis, and the only efficacious medicine. It is alſo uſed in making Glauber's ſalt.

BORBONIA, in botany, a genus of the diadelphia-decandria claſs of plants, the flower of which is pentapetalous, papilionaceous, and hairy on the outſide; the fruit is a roundiſh acuminated pod, with one cell, containing one ſeed in the ſhape of a kidney.

BORBORITES, *borborita*, in church-hiſtory,

ſtory, a ſect of gnoſtics, in the ſecond century, who, beſides embracing the errors of theſe heretics, denied the laſt judgment.

Their name comes from βορβορος, filth, on account of a cuſtom they had of daubing their faces and bodies with dirt and filth.

BORCH, a town of lower Saxony, in Germany, about fourteen miles north-eaſt of Magdeburg; eaſt longitude 12° 14′, north lat. 52° 25′.

BORCHLOEN, or LOOTS, a town of the biſhopric of Liege, in Germany, about fifteen miles north weſt of the city of Liege; eaſt longitude 5° 30′, north latitude 50° 50′.

BORDER, in gardening, is made to incloſe parterres, that they may not be injured in walking in them.

Borders are made either circular, ſtrait, or in cants; and are turned into knots, ſcrols, volutes, and other compartiments. They are rendered very ornamental by the flowers, ſhrubs, yews, &c. that are raiſed in them. They are always laid with a ſharp riſing in the middle; becauſe if they are flat, they are no ways agreeable to the eye: and as for their breadth, the largeſt are allowed five or ſix feet, and the leſſer commonly four. There are four ſorts, 1. Thoſe continued about parterres, without any interruption. 2. Thoſe cut into compartiments and convenient diſtances by ſmall paſſages; theſe two are raiſed in the middle, and adorned with flowers and ſhrubs. 3. Even and flat ones, without flowers. And, 4. Quite plain borders, only ſanded, as in parterres of orangery.

BORDER, or BORDURE, in heraldry. See the article BORDURE.

BORDERS alſo denote the leaves ſtanding about the middle thrum of a flower.

BORD-FREE. See the article FREE.

BORD-HALFPENNY, a ſmall toll, by cuſtom paid to the lord of the town for ſetting up boards, tables, booths, &c. in fairs and markets.

BORD LANDS, the demeſnes which lords keep in their hands for the maintenance of their board or table.

BORD-LODE, a ſervice required of tenants to carry timber out of the woods of the lord to his houſe. It is alſo uſed to ſignify the quantity of proviſion which the bordarii or bordmen paid for their bord-lands.

BORD-SERVICE, the tenure of bord-lands, by which ſome lands in certain places are held of the biſhop of London, and the tenants now pay ſix-pence *per* acre, in lieu of finding proviſion antiently for their lord's table.

BORDURE, in heraldry, a cutting off from within the eſcutcheon all round it about $\frac{1}{5}$ of the field, ſerving as a difference in a coat of arms, to diſtinguiſh families of the ſame name, or perſons bearing the ſame coat. See plate XXIX. fig. 5.

If the line conſtituting the bordure be ſtrait, and the bordure be plain, then in blazoning you muſt only name the colour of the bordure.

Bordures are ſometimes ingrailed, gobonated, invicted, &c. See the articles INGRAILED, &c.

If the bordure be charged with any part of plants or flowers, the term is verdoy of trefoils, or whatever flower it be. If it conſiſts of ermins, vairy, or any of the furs, they ſay purflew of ermins, &c. If the bordure be charged with martlets, the word is charged with an enalyron of martlets, &c.

Bordures are ſymbols of protection, favour and reward, and as ſuch kings beſtow them on thoſe they have a value for.

BORE, among engineers, denotes the diameter of the barrel of a gun or cannon, or rather its whole cavity.

Square BORE, among mechanics, a ſquare piece of well-tempered ſteel, fitted into a handle, ſerving to widen holes, and make them perfectly round.

BOREA, in natural hiſtory, the name whereby the antients called the bluiſh, green, ſofter, and dull jaſper. See the article JASPER.

This ſtone is generally accounted of the malachites kind, but improperly, as it is much ſofter than that; and ſome have imagined the variety of this ſpecies to be the turquoiſe of the moderns, but erroneouſly. It is conſiderably heavy, and though but moderately hard, is yet capable of a very elegant poliſh.

BOREAL, in a general ſenſe, ſomething relating to the north. Thus,

BOREAL SIGNS, in aſtronomy, are the firſt ſix ſigns of the zodiac, or thoſe northwards of the equinoctial.

Aurora-BOREALIS. See the article AURORA.

BOREAS, a Greek name, now in common uſe for the north wind.

Pezron obſerves, that antiently boreas ſignified the north-eaſt wind, blowing at the time of the ſummer ſolſtice. Boreas is repreſented in painting like an old man with

with a horrible look, his hair and beard covered with ſnow or hoar froſt, with the feet and tail of a ſerpent.

BORGO DE ST. SEPULCHRO, a town of Tuſcany, about fifty miles eaſt of Florence, near the head of the Tiber; eaſt longitude 13°, and north latitude 43° 30′.

BORGO DE VAL DE TARO, a town of Italy, in the dutchy of Parma, about twenty miles ſouth-weſt of that city; eaſt longitude 10° 36′, north latitude 44° 35′.

BORGO-FORTE, a town of the Mantuan, in Italy, ſituated at the confluence of the rivers Po and Menzo, about eight miles ſouth of Mantua; eaſt longitude 11°, north latitude 44° 50′.

BORGO ST. DONINO, a city of Italy, in the dutchy of Parma, about ten miles north-weſt of that city; eaſt longitude 10° 31′, north latitude 44° 50′.

BORIA, a city of Arragon, in Spain, about thirty-five miles north-weſt of Saragoſſa: weſt longitude 2°, and north latitude 41° 40′.

BORING, in a general ſenſe, the art of perforating, or making a hole through any ſolid body.

BORING *of water pipes.* See the article PIPE.

BORING, in farriery, an operation in uſe for the cure of wrenched ſhoulders in horſes. It is this: having cut a hole in the ſkin, over the part affected, they blow it up with a tobacco-pipe, as a butcher does a ſhoulder of veal; after which they thruſt a cold flat iron, like the point of a ſword-blade, eight or ten inches up between the ſhoulder-blade and the ribs: this they call boring.

BORING, in mineralogy, a method of pierceing the earth with ſcooping irons, which, being drawn back at proper times, bring up with them ſamples of the different ſtrata through which they have paſſed; by the examination of which the ſkilful mineraliſt will be able to gueſs whereabouts a vein of ore may lie, or whether it will be worth while to open a mine there or no.

BORIQUE, one of the Caribbee-Iſlands, lying ſouth-eaſt of Porto Rico, in 64° 30′ weſt longitude, and 18° north latitude.

BORMIO, a territory of the Griſons, in Italy, having the dominions of Venice on the ſouth.

BORNE, a market-town in Lincolnſhire, about thirty miles ſouth of the city of Lincoln; weſt longitude 20′, and north latitude 52° 40′.

BORNEO, a large iſland in the indian ocean, ſituated between 107° and 117° eaſt longitude, and between 7° 30′ north latitude, and 4° ſouth latitude.

Its figure is almoſt round, and computed to be two thouſand five hundred miles in circumference, and, conſequently, containing a greater number of ſquare acres than any iſland in the known world.

BORNEO is alſo the name of the principal town of the above iſland, ſituated on a bay at the north-weſt part, in 111° 30′ eaſt longitude, and 4° 30′ north latitude.

BORNHOLM, an iſland in the Baltic-ſea, ſituated on the coaſt of Schonen, in Sweden, about forty three miles north-eaſt of the iſland of Rugen, in 15° eaſt longitude, and 55° 15′ north latitude.

BOROUGH, BURROUGH, BOROW, or BURGH, in a general ſenſe, ſignifies a town or a corporation, which is not a city. The word, in its original ſignification, is by ſome ſuppoſed to have meant a company, conſiſting of ten families, which were bound together as each other's pledge. Afterwards, as Verſtegan has it, borough came to ſignify a town, having a wall or ſome kind of encloſure round it. And all places that in old times had the name of borough, it is ſaid, were fortified, or fenced in ſome ſhape or other. Borough is a place of ſafety and privilege: and ſome are called free burghs, and the tradeſmen in them free burgeſſes, from a freedom they had granted to them originally, to buy and ſell without diſturbance, and exempt from toll.

BOROUGH is now particularly appropriated to ſuch towns or villages as ſend burgeſſes or repreſentatives to parliament, whether they be incorporated or not.

They are diſtinguiſhed into thoſe by charter or ſtatute, and thoſe by preſcription or cuſtom: the number in England is one hundred and forty-nine, ſome of which ſend one, but the moſt of them two repreſentatives.

Royal BOROUGHS, in Scotland, are corporations made for the advantage of trade, by charters granted by ſeveral of their kings, having the privilege of ſending commiſſioners to repreſent them in parliament, beſides other peculiar immunities. They form a body of themſelves, and ſend commiſſioners each to an annual convention at Edinburgh, to conſult the benefit of trade, and their general intereſt.

BOROUGH-ENGLISH, a cuſtomary deſcent of lands or tenements, in certain places, by which they deſcend to the youngeſt in-

instead of the eldest son; or, if the owner have no issue, to the younger instead of the elder brother. This custom goes with the land, although there be a devise or feoffment at the common law to the contrary. The reason of this custom, says Littleton, is, because the youngest is presumed, in law, to be least able to provide for himself.

BOROUGH-HEAD, or HEADBOROUGH, called also borough-holder, or burfholder, the chief man of the *decenna*, or hundred, chosen to speak and act in behalf of the rest.

Headborough also signifies a kind of head constable, where there are several chosen as his assistants, to serve warrants, &c. See the article CONSTABLE.

Law-BOROUGHS, or BURROWS, in the law of Scotland, denotes binding to the peace. See the article PEACE.

BOROUGH-BRIDGE, a town in the north-riding of Yorkshire, about fifteen miles north-west of York; west longitude 1° 15′, and north latitude 54° 10′.

BORRAGE, *borrago*. See the next article.

BORRAGO, *borrage*, in botany, a genus of the pentandria-monogynia class of plants, the flower of which consists of a single petal of the length of the cup, and divided into five segments: there is no pericarpium, but the cup grows larger and inflated, and contains four seeds of a roundish figure, rugose, carinated outwardly from the point, globose at the base, and inserted into a hollow receptacle. See plate XXIX. fig. 6. The leaves of borrage are accounted cordial, and good in removing faintness; for which reason the tops are frequently put into wine and cool tankards. Boerhaave recommends the expressed juice in all inflammatory diseases. The flowers are one of the four cordial flowers. The only officinal preparation is the conserve of the flowers.

BORRELLISTS, in church-history, a christian sect in Holland. They are a kind of anabaptists, but they have some very particular opinions. They reject the use of churches, of the sacraments, public prayer, and all other external acts of worship. They assert, that all the christian churches of the world have degenerated from the pure apostolical doctrines, because they have suffered the word of God, which is infallible, to be expounded, or rather corrupted, by doctors, who are not infallible. They lead a very austere life, and employ a great part of their goods in alms.

BOS, the OX, in zoology, a genus of quadrupeds, of the order of the *pecora*, the characters of which are, that the horns are hollow and turned forward, bent like crescents, and smooth on the surface; the fore teeth are eight in number, and there are no canine teeth.

Of this genus authors enumerate the following species, *viz.* 1. The common tame kind. 2. The *bonasus*. 3. The *bison*, or the *bos* with a very long mane, and a gibbose back; being a robust and fierce animal, equal in size to the common bull, and a native of America. It is also called *bos camelita*. 4. The *bubalus*. See the articles OX, BONASUS, &c.

BOSA, or BOSSA, a town of Sardinia, situated on its western coast, at the mouth of a river of the same name; east longit. 8° 30′, and north latitude 40° 15′.

BOSCAGE, the same with a grove, or thicket.

BOSCAGE, in a law sense, is that food which trees yield to cattle, as mast, &c. But Manwood says, to be quit of boscage, is to be discharged of paying any duty for wind-fall wood in the forest.

BOSCAGE, among painters, denotes a landscape representing much wood and trees.

BOSEA, in botany, a genus of plants, belonging to the pentandria-digynia class. There is no corolla: the fruit is a globose berry, with one cell, containing a single acuminated seed.

BOSNA-SERAJO, the capital of the province of Bosnia; east longitude 19°, and north latitude 44°.

BOSNIA, a frontier province of christendom, divided between the house of Austria and the Turks; that part of it lying eastward of the river Unna, belonging to the Turks; and the rest of it, lying westward of that river, to the Austrians.

BOSPHORUS, in geography, denotes, in general, a narrow sea, or channel, separating two continents, and serving as a communication between two seas.

Bosphorus is more particularly used for the straits of Constantinople, which divide Europe from Asia.

This was the original bosphorus; so called because oxen could swim over it; and from the resemblance between it and the streights of Kaffa, these last were antiently called the cimmerian, as the former were the thracian bosphorus.

BOSQUETS, in gardening, groves so called from *boschetto*, an italian word, which signifies a little wood. They are compartments in gardens, formed by the

branches of trees, diſpoſed either regularly in rows, or wildly and irregularly, according to the fancy of the owner. A boſquet is either a plot of ground incloſed with paliſades of horn-beam, the middle of it being filled with tall trees, as elm or the like, the tops of which make a tuft or plume; or it conſiſts of only high trees, as horſe-cheſnut, elm, &c. The ground ſhould be kept very ſmooth and rolled, or elſe covered with graſs, after the manner of the green-plots. In planting boſquets, care ſhould be taken to mix the trees which produce their leaves of different ſhapes, and various ſhades of green, and hoary or mealy leaves, ſo as to afford an agreeable proſpect. Boſquets are only proper for ſpacious gardens, and require a great expence to keep them up.

BOSSAGE, in architecture, a term uſed for any ſtone that has a projecture, and is laid rough in a building, to be afterwards carved into mouldings, capitals, coats of arms, &c.

Boſſage is alſo that which is otherwiſe called ruſtic work, and conſiſts of ſtones which advance beyond the naked, or level, of the building, by reaſon of indentures or channels left in the joinings. Theſe are chiefly uſed in the corners of edifices, and thence called ruſtic quoins. The cavities or indentures are ſometimes round, ſometimes chain-framed, or bevelled, ſometimes in a diamond form, and ſometimes incloſed with a cavetto, and ſometimes with a liſtel.

BOSSINEY, a borough-town of Cornwall, ſituated on the Iriſh channel, about fifteen miles north-weſt of Launceſton: weſt longitude 5°, and north latitude 50° 40′.

It ſends two members to parliament.

BOSSORA, or BASSORA, a large port-town of aſiatic Turky, in the province of Eyraca Arabic; ſituated on the weſtern ſhore of the river Euphrates, about forty miles north-weſt of the gulph of Perſia, or Boſſora: eaſt longitude 47°, and north latitude 30°.

BOSSUPT, a town of Brabant, in the auſtrian Netherlands, about eight miles ſouth of Louvain; eaſt longitude 4° 30′, and north latitude 50° 52′.

BOSTANGIS, in the turkiſh affairs, perſons employed in the garden of the ſeraglio, out of whoſe number are collected thoſe who are to row in the grand ſignior's brigantines, when he has a mind to divert himſelf with fiſhing, or take the air upon the canal. They who row on the left hand are only capable of mean employments in the gardens; but they who row on the right hand may be promoted to the charge of boſtangi-baſchi, who has the general intendancy of all the grand ſignior's gardens, and commands above ten thouſand boſtangis.

BOSTON, a port-town of Lincolnſhire, ſituated near the mouth of the river Witham, about twenty-ſix miles ſouth-eaſt of Lincoln; eaſt longitude 1° 5′, and north latitude 53°.

BOSTON is alſo the name of the capital of New-England, ſituated on a peninſula, at the bottom of a fine bay, covered with ſmall iſlands and rocks, and defended by a caſtle and platform of guns; weſt longitude 71°, and north latitude 42° 24′.

It is a flouriſhing town, wherein are ten churches, ſix of them belonging to independents. The number of its inhabitants are computed to be about fourteen thouſand.

BOSWORTH, a market-town of Leiceſterſhire, ſituated about eleven miles ſouth-weſt of Leiceſter; weſt longitude 1° 25′, and north latitude 52° 45′.

BOTANIST, a perſon ſkilled in botany, and conſequently capable of aſſigning to every plant its proper characters and name. See the next article.

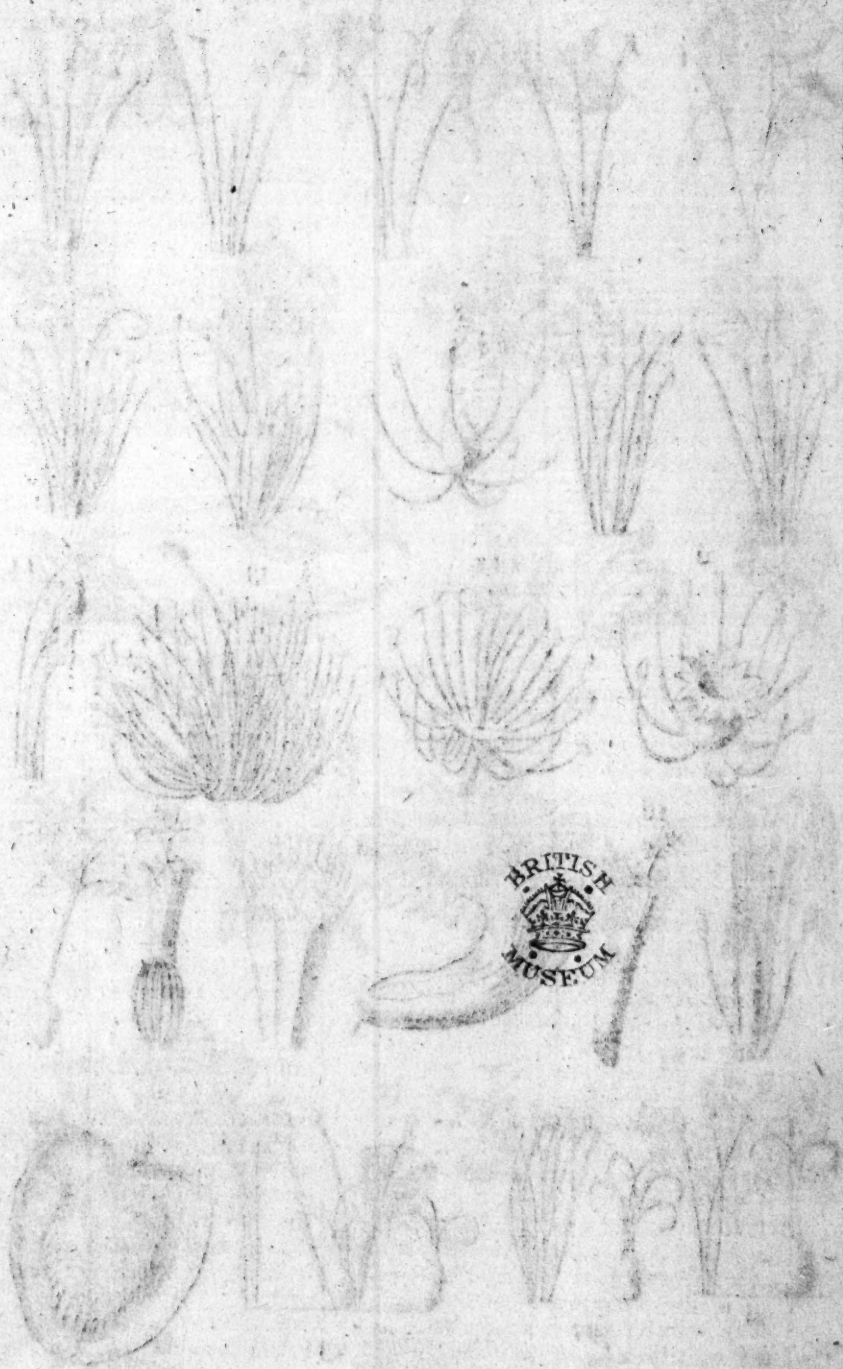
BOTANY, that branch of natural hiſtory, which treats of plants, their claſſes, ſubdiviſions, various genera, and ſpecies.

In this ſenſe botany differs from phytology and pharmacy, which treat of the generation, ſtructure, medicinal and other uſes of plants; as alſo from agriculture, and gardening, which comprehend their culture and propagation. See the articles AGRICULTURE, &c.

The ſcience of botany is differently explained by different authors; but the two ſyſtems of Tournefort and Linnæus more eſpecially deſerve our conſideration.

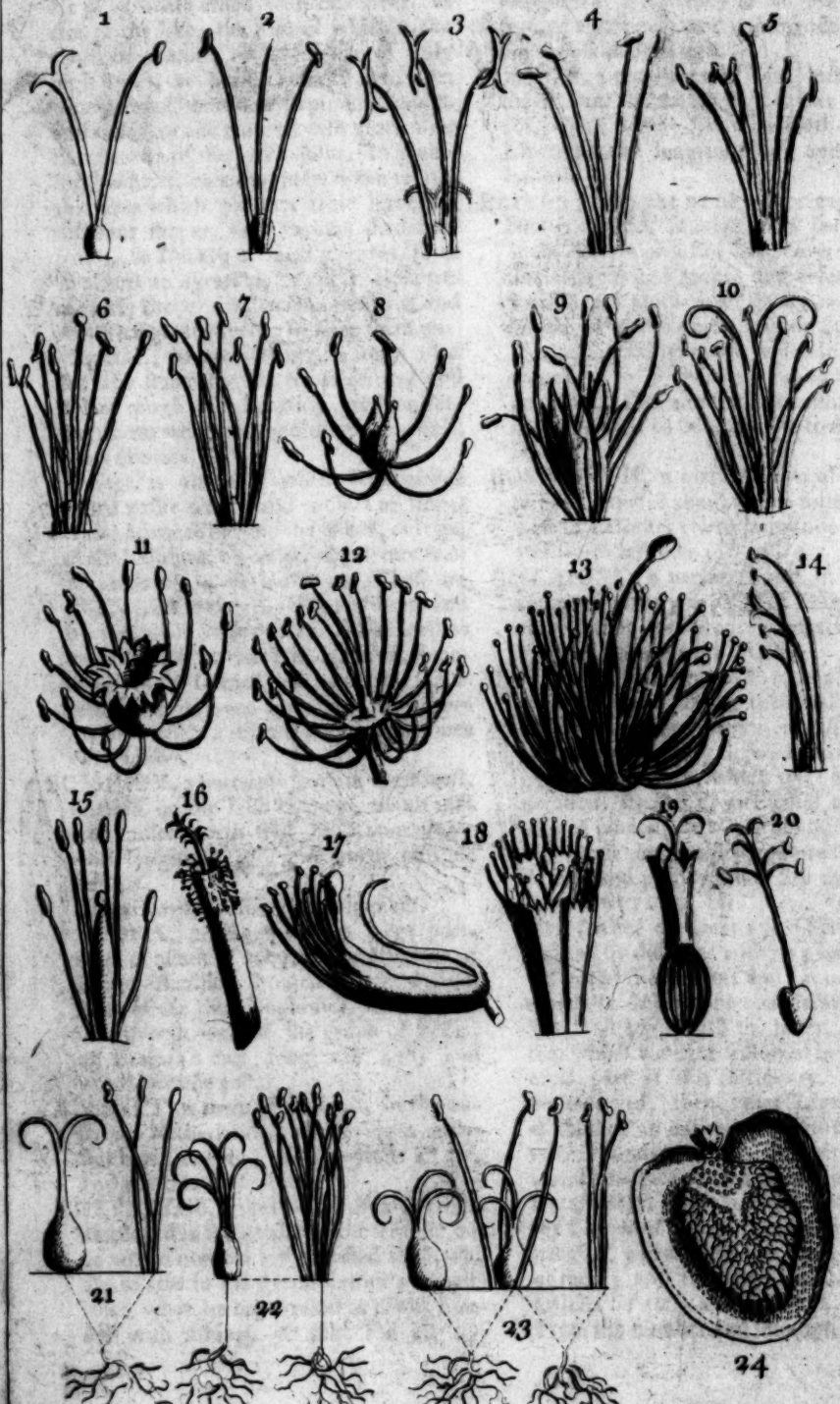
We ſhall begin with the latter, as being that which we have followed in the botanical part of this dictionary. It is to be obſerved, then, that Linnæus has eſtabliſhed an entirely new ſyſtem of botany, founded on the number and different ſtructure obſervable in the male and female parts of generation of each plant; the former of which is called ſtamen, or ſtamina, when there are more than one of them; and the latter piſtil. See the articles STAMINA and PISTIL.

From the number and ſituation of the ſtamina,


BRITISH MUSEUM

THE LINNÆAN SYSTEM of BOTANY.

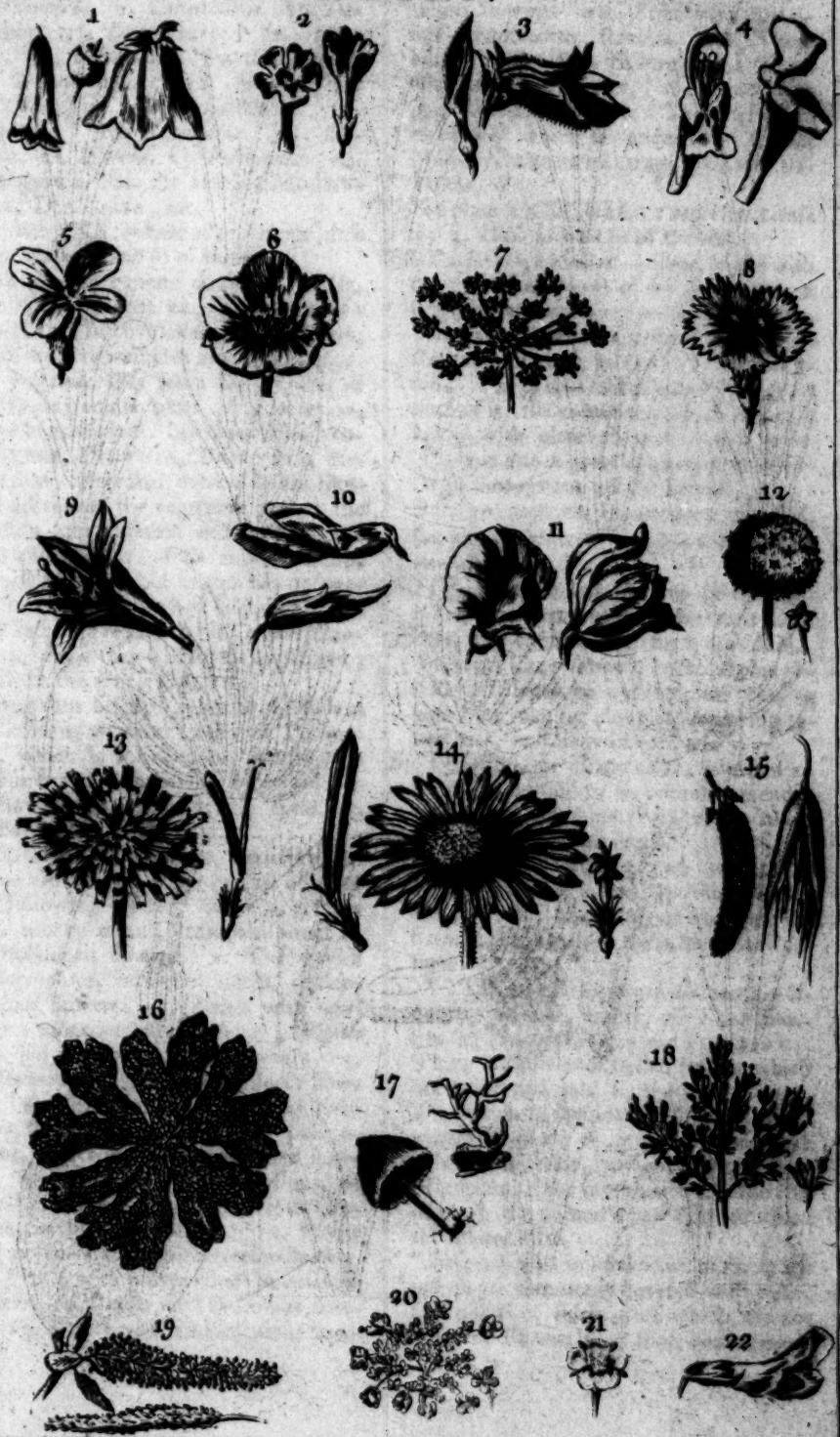
CLASSES.



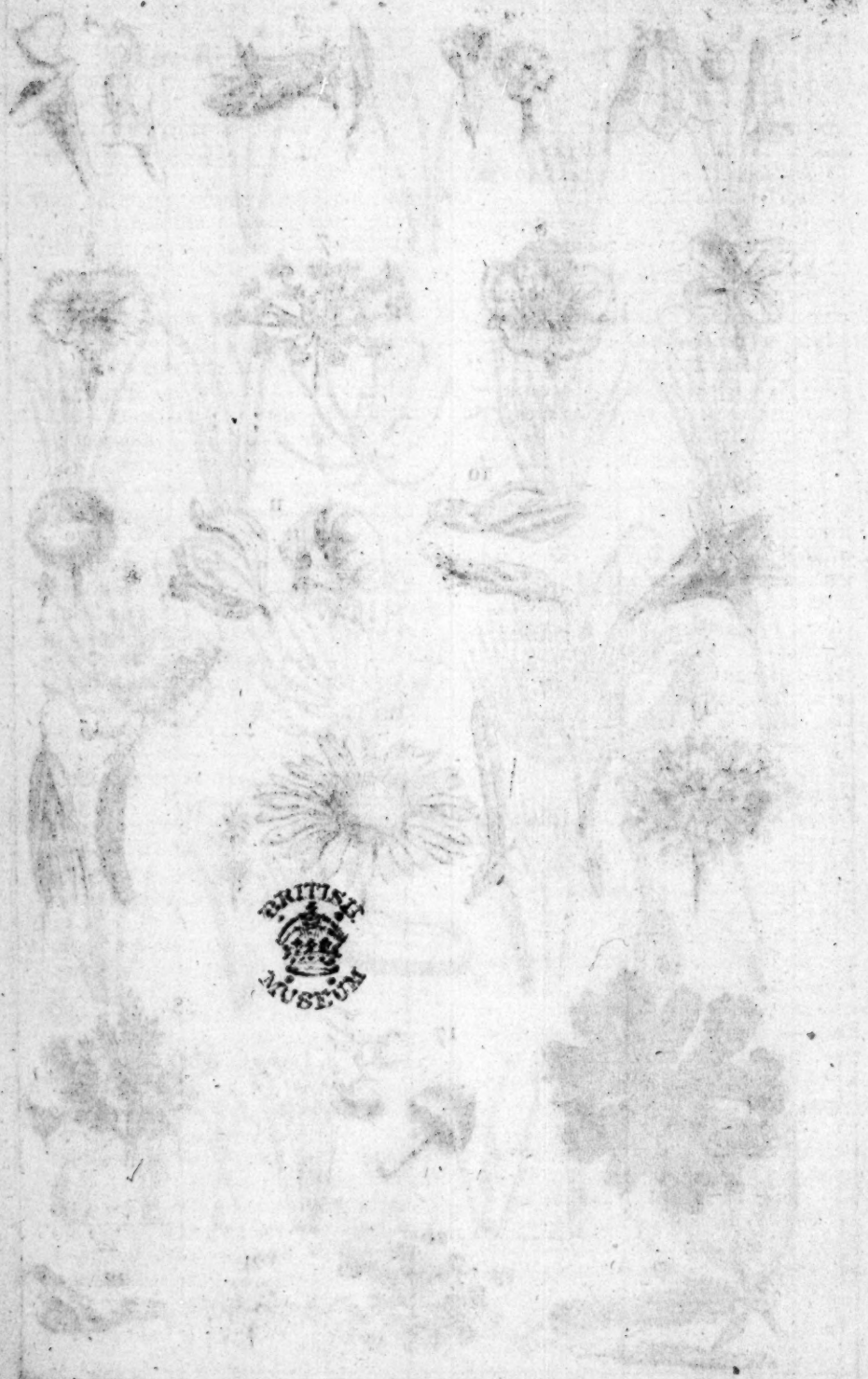
J. Jeffreys sculp.

TOURNEFORT'S SYSTEM of BOTANY.

CLASSES.



T. Jefferys sculp


BRITISH MUSEUM

mina, he has arranged the whole family of plants under twenty-four claſſes, *viz.* 1. The *monandria*. 2. *Diandria*. 3. *Triandria*. 4. *Tetrandria*. 5. *Pentandria*. 6. *Hexandria*. 7. *Heptandria*. 8. *Octandria*. 9. *Enneandria*. 10. *Decandria*. 11. *Dodecandria*. 12. *Icoſandria*. 13. *Polyandria*. 14. *Didynamia*. 15. *Tetradynamia*. 16. *Monadelphia*. 17. *Diadelphia*. 18. *Polyadelphia*. 19. *Syngeneſia*. 20. *Gynandria*. 21. *Monoecia*. 22. *Dioecia*. 23. *Polygamia*. 24. *Cryptogamia*. See the articles MONANDRIA, DIANDRIA, *&c.*

See plate XXX. where 1. repreſents claſs 1; 2, claſs 2; and ſo of the reſt.

Theſe are the general claſſes of plants, eſtabliſhed by that excellent botaniſt; who farther ſubdivides them into orders, which he denominates *monogynia*, *digynia*, *trigynia*, *&c.* from the number of piſtils, or female parts of generation, found in each plant. See the articles MONOGYNIA, DIGYNIA, TRIGYNIA, *&c.*

The ſame celebrated naturaliſt has likewiſe diſtributed the vegetable part of the creation into different orders, from the form and ſtructure of the calyx, or cup, of their flowers: but as this has no connection with the method laid down, we muſt refer the reader to his Genera Plantarum, where they will find it explained; as alſo to the article CALYX.

Having thus briefly explained the ſyſtem of Linnæus, we come to that of Tournefort, which is founded on the different ſtructure and diſpoſition, obſervable in the flowers, or, more ſtrictly ſpeaking, the flower-leaves of plants.

According to Tournefort, therefore, all plants are ranged under one or other of the following claſſes, *viz.* 1. Plants with monopetalous, campaniform, or bell-faſhioned flowers. 2. Thoſe with monopetalous, infundibuliform, or funnel-like flowers. 3. Plants with anomalous monopetalous flowers. 4. Plants with polypetalous labiated flowers. 5. Plants with polypetalous cruciform flowers. 6. Plants with polypetalous roſaceous flowers. 7. Plants with polypetalous, roſaceous, and umbellated flowers. 8. Plants with caryophyllous, or pink-like flowers. 9. Plants with liliaceous, or lily-like flowers. 10. Plants with polypetalous papilionaceous flowers. 11. Plants with polypetalous anomalous flowers. 12. Plants with floſculous flowers. 13. Plants with ſemifloſculous flowers. 14. Plants with radiated flowers. 15. Plants with ſtamineous flowers. 16. Plants without flowers, but having viſible ſeeds. 17. Plants with neither viſible flowers nor ſeeds. 18. Trees with apetalous flowers. 19. Trees with apetalous amentaceous flowers. 20. Trees with monopetalous flowers. 21. Trees with roſaceous flowers. 22. Trees with papilionaceous flowers. The deſcription of each of which ſee under their ſeveral heads MONOPETALOUS, CAMPANIFORM, *&c.*

See plate XXXI. where 1 repreſents claſs 1; 2, claſs 2. and ſo of the reſt.

BOTARGO, a kind of ſauſage, made with the eggs, and blood of the ſea-mullet, a large fiſh, common in the Mediterranean. The beſt kind comes from Tunis, in Barbary: it muſt be choſen dry and reddiſh. The people of Provence uſe a great deal of it, the common way of eating it being with olive oil and lemon juice. There is alſo a great conſumption of botargo throughout all the Levant.

Botargo pays on importation 2 $\frac{87}{100}$ d. the pound; whereof 2 $\frac{13}{100}$ d. is repaid on exportation.

BOTE, *bota*, in our old law-books, ſignifies recompence or amends: thus manbote, is a compenſation for a man ſlain.

There are likewiſe houſe-bote and plough-bote privileges to tenants, of cutting wood for making ploughs, repairing tenements, and likewiſe for fuel.

BOTELESS, or BOOTLESS, is when an offender was ſaid to be without emendation, when no favour can acquit him; as in the caſe of ſacrilege.

BOTHNIA, the name of two provinces in Sweden, diſtinguiſhed by the epithets eaſt and weſt, and lying on each ſide the bothnic gulph, which takes its name from them.

BOTTLE, a veſſel proper to contain liquors, made of leather, glaſs, or ſtone. See the articles GLASS and POTTERY.

There are bottles of boiled leather which are made and ſold by the caſe-makers. Thoſe among the antient Hebrews were generally made of goat-ſkin, with the hair on the inſide, well pitched and ſewed together; the mouth of the bottle was through the animal's paw that furniſhed the matter of it.

There are now in uſe bottles of fine glaſs which are commonly covered with osier, and others of thick glaſs which are not covered. Formerly all thoſe bottles made

in France held exactly a pint Paris measure, or about a quart of our Engliſh wine meaſure; but ſince the tavern-keepers ſell moſt of their wine in ſuch bottles, notwithſtanding an ordonnance to the contrary, that one would think the glaſsmakers had entered into an agreement with them, not to make any bottles that hold the full meaſure, there are none but what hold leſs, and ſome conſiderably ſo.

In commerce, bottles of earth or ſtone pay $11\frac{55}{100}$d. each dozen, on importation; whereof $10\frac{12}{100}$d. is repaid on exporting them. Glaſs bottles covered with wicker, pay 6s. $7\frac{92}{100}$d. the dozen; whereof 6s. $2\frac{23}{100}$d. is repaid on exporting them. Glaſs bottles covered with leather, pay 1l. 9s. $11\frac{77}{100}$d. the dozen; whereof 1l. 7s. $10\frac{12}{100}$d. is repaid on exporting them. Glaſs bottles uncovered, pay 1s. $5\frac{83}{100}$d. the dozen; 1s. $4\frac{70}{100}$d. being repaid on exporting them. Bottles made of flint glaſs, pay 8d. for each pound weight; and thoſe made of green glaſs only 2d. for each pound weight. Bottles made of wood, called ſucking-bottles, pay by the groſs, or twelve dozen, 1s. $11\frac{10}{100}$d; whereof 1s. $8\frac{23}{100}$d, is repaid on exporting them.

BOTTLING *of beer*. See the article BEER.

BOTTOM, in a general ſenſe, denotes the loweſt part of a thing, in contradiſtinction to the top, or uppermoſt part.

BOTTOM, in navigation, is uſed to denote as well the channel of rivers and harbours, as the body or hull of a ſhip: thus, in the former ſenſe, we ſay, a gravelly bottom, clayey bottom, ſandy-bottom, &c. and in the latter ſenſe, a britiſh bottom, a dutch bottom, &c.

By ſtatute, certain commodities imported in foreign bottoms, pay a duty called petty cuſtoms, over and above what they are liable to, if imported in britiſh bottoms.

BOTTOMRY, in commerce, a marine contract for the borrowing of money upon the keel or bottom of a ſhip; that is to ſay, when the maſter of a ſhip binds the ſhip itſelf, that if the money be not paid by the time appointed, the creditor ſhall have the ſaid ſhip.

BOTTOMRY is alſo where a perſon lends money to a merchant, who wants it in traffic, and the lender is to be paid a greater ſum at the return of the ſhip, ſtanding to the hazard of the voyage. On which account, though the intereſt be greater than what the law commonly allows, yet it is not uſury, becauſe the money being furniſhed at the lender's hazard, if the ſhip periſhes, he ſhares in the loſs.

It is enacted by 19 Geo. II. cap. xxxvii. that after Auguſt 1, 1746. every ſum of money lent on bottomry, upon the ſhips of any ſubjects to or from the Eaſt-Indies, ſhall be lent only on the ſhip, or the merchandizes laden on board her, and ſo expreſſed in the condition of the bond; and the benefit of ſalvage ſhall be granted to the lender, his agents, &c. who only ſhall have a right to make aſſurance on the money lent: and no borrower of money on bottomry ſhall recover more on any aſſurance, than the value of his intereſt on the ſhip, or effects, excluſive of the money borrowed. And if the value of his intereſt doth not amount to the money borrowed, he ſhall be reſponſible to the lender for the ſurplus, with lawful intereſt for the ſame, together with the aſſurance, and all charges whatſoever, &c. notwithſtanding the ſhip and merchandize ſhall be totally loſt.

There is a fictitious way of taking up money, in the nature of bottomry, upon ſuppoſition of a ſhip and maſter, when, indeed, there is no ſuch ſhip or maſter in being; the condition reciting, if that ſhip (naming her) ſhall not arrive at ſuch a place, within twelve months, the money agreed on to be paid, ſhall be paid; but if the ſhip ſhall arrive, then nothing is to be paid. This unjuſtifiable method of raiſing money is a common practice among the Italians; and, it is to be feared, has been too frequently uſed by ſome perſons on this ſide the water.

BOTTONY. A croſs bottony, in heraldry, terminates at each end in three buds, knots, or buttons, reſembling, in ſome meaſure, the three-leaved graſs; on which account Segoin, in his Treſor Heraldique, terms it *croix trefflee*. It is the badge of the order of St. Maurice. See plate XXXII. fig. 1.

BOTWAR, a town of Wirtemberg, in the circle of Swabia, in Germany, ſituated about fifteen miles ſouth-eaſt of Hailbron; eaſt longitude 9° 15′, and north latitude 49°.

BOVA, a town of the kingdom of Naples, in Italy, about twenty miles ſouth-eaſt of Reggio; eaſt longitude 16° 15′, and north latitude 38° 20′.

BOUCHAIN,

BOUCHAIN, a fortified town of Hainalt, in the french Netherlands, about ſeven miles north of Cambray; eaſt longitude 3° 15′, and north latitude 50° 30′.

BOUCHE *of court*, the privilege of having meat and drink at court, ſcot-free. This privilege is ſometimes only extended to bread, bear, and wine; and was antiently in uſe as well in the houſes of noblemen as in the king's court.

BOUGH denotes much the ſame with branch. See the article BRANCH.

BOUILLON, a ſtrong town with a caſtle, about three leagues from Sedan, on the river Semoy: it is capital of a dutchy of the ſame name, ſituated between the dutchy of Luxemburg and biſhopric of Liege; eaſt longitude 5°, and north latitude 49° 49′.

BOUILLON, in the manege, a lump or excreſcence of fleſh, that grows either upon, or juſt by, the fruſh, inſomuch that the fruſh ſhoots out, juſt like a lump of fleſh, and makes the horſe halt; and this we call the fleſh blowing upon the fruſh. Manege horſes, that never wet their feet, are ſubject to theſe excreſcences, which make them very lame.

BOVINO, a ſmall city of the Capitanate, in the kingdom of Naples, about ſixty miles eaſt of the city of Naples; eaſt longit. 16° 15′, and north latit. 41°.

BOULDER-WALL, a kind of wall built of round flints or pebbles, laid in a ſtrong mortar, and uſed where the ſea has a beach caſt up, or where there are plenty of flints.

BOULTINE, a term which workmen uſe for a moulding, the convexity of which is juſt one fourth of a circle, being the member next below the plinth in the tuſcan and doric capital.

BOUNCE, in ichthyology, a name uſed for the browniſh variegated ſqualus, with the pinna ani in the middle, between the anus and tail. This fiſh rarely grows to more than three feet in length, and is but moderately thick in proportion. See the article SQUALUS.

BOUND MASONRY, HIDE-BOUND, HOOF-BOUND. See the articles MASONRY, HIDE, HOOF.

BOUNTY, in commerce, a premium paid by the government to the exporters of certain britiſh commodities, as gold and ſilver lace, ſilk ſtockings, fiſh, corn, &c. the rate of all which will be ſpecified under the articles LACE, FISH, CORN, &c. The happy influence which bounties have on trade and manufactures is well known: nor can there be a more convincing proof of the good intentions of the government under which we live, than the great care that is taken to give all poſſible encouragement, to thoſe who ſhall eſtabliſh, or improve any hazardous branch of trade.

BOURBON, or MASCARENHA, an iſland in the indian ocean, about one hundred miles eaſt of Madagaſcar, and ſubject to France; eaſt longitude 54°, and ſouth latitude 21°.

BOURBON-ARCHEBAUT, the capital of the dutchy of Bourbon, in the Lyonois, in France; eaſt longitude 3° 10′, and north latitude 46° 35′.

BOURDEAUX, the capital of all Guienne and Gaſcony, ſituated on the river Garonne, in 40′ weſt longitude, and 44° 50′ north latitude.

BOURG, the capital of the iſland of Cayenne, a french colony on the coaſt of Guiana, in ſouth America; weſt longitude 52°, and north latitude 5°.

BOURG-EN-BRESS, the capital of Breſſe, in the province of Burgundy, in France, thirty-ſix miles weſt of Geneva, and thirty-two north of Lyons; eaſt longitude 5° 5′, and north latitude 46° 20′.

BOURGES, the capital of the territory of Berry, in the Orleanois, in France, ſituated about fifteen miles ſouth-eaſt of Orleans; eaſt longitude 2° 30′, and north latitude 47° 10′.

BOURGET, a town of Savoy, ſix miles north of Chamberry; eaſt longitude 5° 55′, and north latitude 45° 45′.

BOURIGNONISTS, the name of a ſect among the low country proteſtants, being ſuch as follow the doctrine of Antoinette Bourignon, a native of Liſle, and apoſtate of the roman catholic religion.

The principles of this ſect bear a very near reſemblance, with thoſe of the quietiſts, quakers, or fanatics. They conduct themſelves by pretended revelations.

BOURO, an iſland in the indian ocean, ſubject to the Dutch; eaſt longitude 124°, and ſouth latitude 3° 30′.

BOUTANT, or ARCH-BOUTANT, in architecture, a flat arch or part of an arch, abutting againſt the reins of a vault, to prevent its giving way.

A pillar BOUTANT is a large chain or pile of ſtone, made to ſupport a wall, terrace, or vault.

BOUTE, in the manege. A horſe is called bouté, when his legs are in a ſtraight line from the knee to the coronet: ſhort-jointed

jointed horſes are apt to be bouté; and, on the other hand, long-jointed horſes are not.

BOUTON, an iſland in the indian ocean; eaſt longitude 121° 30′, and lying between 4° and 5° ſouth latitude.

BOUTS-RIMEZ, in french poetry, a term ſignifying certain rhymes diſpoſed in order, and given to a poet, together with a ſubject, to be filled up with verſes ending in the ſame word and ſame order. In chooſing the rhymes, it is uſual to fix on ſuch as ſeem the remoteſt, and have the leaſt connection. Some authors fancy, that theſe rhymes are, of all others, the eaſieſt, that they aſſiſt the invention, and furniſh new thoughts.

BOW, *arcus*, a weapon of offence made of ſteel, wood, horn, or other elaſtic matter, which, after being bent by means of a ſtring faſtened to its two ends, in returning to its natural ſtate, throws out an arrow with prodigious force.

The uſe of the bow is, without all doubt, of the earlieſt antiquity. It has likewiſe been the moſt univerſal of all weapons, having obtained amongſt the moſt barbarous and remote people, who had the leaſt communication with the reſt of mankind.

The figure of the bow is pretty much the ſame in all countries, where it has been uſed; for it has generally two inflexions or bendings, between which, in the place where the arrow is drawn, is a right line. The grecian bow was in the ſhape of a Σ, of which form we meet with many, and generally adorned with gold or ſilver. The ſcythian bow was diſtinguiſhed from the bows of Greece and other nations by its incurvation, which was ſo great, as to form an half moon or ſemicircle.

The matter of which bows were made, as well as their ſize, differed in different countries. The Perſians had very great bows made of reeds; and the Indians had alſo, not only arrows, but bows made of the reeds or canes of that country; the lycian bows were made of the cornel tree; and thoſe of the Æthiopians, which ſurpaſſed all others in magnitude, were made of the palm-tree.

Though it does not appear that the Romans made uſe of bows in the infancy of their republic, yet they afterwards admitted them as hoſtile weapons, and employed auxiliary archers in all their wars.

In drawing the bow, the primitive Grecians did not pull back their hand towards their right ear, according to the faſhion of modern ages, and of the antient Perſians, but placing their bow directly before them, returned their hand upon their right breaſt. This was alſo the cuſtom of the Amazons.

The bow is a weapon of offence amongſt the inhabitants of Aſia, Africa, and America, at this day; and in Europe, before the invention of fire arms, a part of the infantry were armed with bows. Lewis XI. firſt aboliſhed the uſe of them in France, introducing, in their place, the halbard, pike, and broad ſword. The long bow was formerly in great vogue in England, and many laws were made to encourage the uſe of it. The parliament under Henry VIII. complained of the diſuſe of long bows, heretofore the ſafeguard and defence of this kingdom, and the dread and terror of its enemies.

BOW is alſo an inſtrument formerly uſed at ſea for taking the ſun's altitude; conſiſting of a large arch of ninety degrees graduated, a ſhank or ſtaff, a ſhade vane, a ſight vane, and an horizon vane. It is now out of uſe.

BOW, among builders, a beam of wood or braſs, with three long ſcrews, that direct a lath of wood or ſteel to any arch; chiefly uſed in drawing draughts of ſhips, and projections of the ſphere; or whereever it is requiſite to draw large arches.

BOW, in muſic, an inſtrument, which, being drawn over the ſtrings of a muſical inſtrument, makes it reſound. It is compoſed of a ſmall ſtick, to which are faſtened eighty or an hundred horſe hairs, and a ſcrew which ſerves to give theſe hairs the proper tenſion. In order that the bow may touch the ſtrings briſkly, it is uſual to rub the hairs with roſin.

BOW, among artificers, an inſtrument ſo called from its figure; in uſe among gunſmiths, lockſmiths, watch-makers, *&c.* for making a drill go. Among turners, it is the name of that pole fixed to the ceiling, to which they faſten the cord that whirls round the piece to be turned.

BOW-STAVES, imported from the britiſh plantations, are free; if from Ireland, Aſia, or Africa, they pay 15*s.* $4\frac{80}{100}$*d.* for every 120; and if from any other country, 1 *l.* 2*s.* $10\frac{80}{100}$*d.* for the ſame number.

BOWS *of a ſaddle* are two pieces of wood laid archwiſe to receive the upper part of a horſe's back, to give the ſaddle its due

due form, and to keep it tight. The fore bow, which ſuſtains the pommel, is compoſed of the withers, the breaſts, the points or toes, and the corking. See the article WITHERS, &c.

The hind bow bears the trouſequin or quilted roll. The bows are covered with ſinews, that is with bulls pizzles beaten, and ſo run all over the bows to make them ſtronger. Then they are ſtrengthened with bands of iron to keep them tight, and on the lower ſide, are nailed on the ſaddle ſtraps, with which they make faſt the girths.

BOW *of a ſhip*, that part of her head which is contained between the ſtern and the after-part of the fore-caſtle, on either ſide; ſo that a ſhip hath two bows, the ſtarboard and the larboard, or, as they are ſometimes called, the weather and the lee bow.

If a ſhip have a broad round bow, they call it a bold bow. If ſhe has a narrow thin bow, they ſay ſhe has a lean bow.

BOW-LINE. See the article BOWLING.

BOW-PIECES, are the pieces of ordinance at the bow of a ſhip.

Rain-BOW. See the article RAIN-BOW.

BOW-BEARER, an inferior officer of the foreſt, who is ſworn to make inquiſition of all treſpaſſes againſt vert or veniſon, and to attack offenders.

BOWE, a market-town of Devonſhire, about twelve miles north-weſt of Exeter: weſt longitude 4°, and north latitude 50° 45′.

BOWELS, in anatomy, the ſame with inteſtines. See the article INTESTINES.

BOWER, in gardening, a place under covert of trees, differing only from an arbour, as being round or ſquare, and made with a kind of dome or ceiling at top; whereas the arbour is always built long and arched.

BOWER, in the ſea-language, the name of an anchor carried at the bow of a ſhip. There are generally two bowers, called firſt and ſecond, great and little, or beſt and ſmall bower. See the article ANCHOR.

Lady's-BOWER, or *Virgin's*-BOWER, in botany, the engliſh name of the clematis. See the article CLEMATIS.

BOWL denotes either a ball of wood, for the uſe of bowling; or a veſſel of capacity, wherein to hold liquors.

Bowls and buckets of wood, imported, pay a duty of $9\frac{57}{100}$d. the dozen; whereof $8\frac{63}{100}$d. is repaid on exporting them.

BOWLING, the art of playing at bowls. The firſt thing to be obſerved in bowling is, the right chuſing your bowl, which muſt be ſuitable to the ground you deſign to run on. Thus, for cloſe alleys, the flat bowl is the beſt; for open grounds of advantage, the round byaſſed bowl; and for plain and level ſwards, the bowl that is as round as a ball. The next is to chuſe your ground; and laſtly to diſtinguiſh the riſings, fallings, and advantages of the places where you bowl.

BOWLING, or BOW-LINE, in a ſhip, a rope made faſt to the leech or middle part of the outſide of the ſail: it is faſtened by two, three or four ropes, like a crow's foot, to as many parts of the ſail; only the mizen bowling is faſtened to the lower end of the yard. This rope belongs to all ſails, except the ſprit-ſail and ſprit-top-ſail. The uſe of the bowling is to make the ſails ſtand ſharp or cloſe, or by a wind.

Sharp the bowling, is hale it taught, or pull it hard. Hale up the bowling, that is pull it harder forward on. Check or eaſe, or run up the bowling, that is let it be more ſlack.

BOWLING-BRIDLES are the ropes by which the bowling is faſtened to the leech of the ſail.

BOWLING-KNOT, a knot that will not ſlip, by which the bowling-bridle is faſtened to the crengles.

BOWLING-GREEN, a kind of parterre, laid with fine turf, deſigned for the exerciſe of bowling. See BOWLING.

BOWSE, in the ſea-language, ſignifies as much as to hale or pull. Thus bowſing upon a tack, is haling upon a tack. Bowſe away, that is pull away all together.

BOW-SPRIT, or BOLT-SPRIT, a kind of maſt, reſting ſlopewiſe on the head of the main ſtem, and having its lower end faſtened to the partners of the fore-maſt, and farther ſupported by the fore-ſtay. It carries the ſprit-ſail, ſprit-top-ſail, and jak-ſtaff; and its length is uſually the ſame with that of the fore-maſt.

BOWYERS, artificers, whoſe employment or occupation it is to make bows. There is a company of bowyers in the city of London, firſt incorporated in 1623.

BOX, in its moſt common acceptation, denotes a ſmall cheſt or coffer for holding things.

Fire-boxes or tinder-boxes pay, on importation, a duty of 3 s. $10\frac{20}{100}$d. the groſs; whereof 3 s. $4\frac{1}{2}$ d. is repaid on exportation. Wooden money-boxes pay

3 s.

3 s. $7\frac{8}{100}$ d. the groſs; whereof 3 s. $2\frac{81}{100}$ d. is repaid on exportation. Neſt-boxes pay 11 s. $6\frac{60}{100}$ d. the groſs; whereof 10 s. $1\frac{1}{2}$ d. is repaid. Pepper-boxes pay 4 s. $3\frac{97}{100}$ d. whereof 3 s. $\frac{36}{100}$ d. is repaid. French-boxes, for marmalade or jelly, pay each dozen 3 s. $1\frac{55}{100}$ d. whereof 1 s. $9\frac{76}{100}$ d. is repaid. Sand-boxes pay 3 s. $10\frac{20}{100}$ d. the groſs; whereof 3 s. $4\frac{1}{2}$ d. is repaid. Snuff-boxes, if of wood, pay 2 s. $4\frac{72}{100}$ d. the dozen; whereof 2 s. $1\frac{87}{100}$ d. is repaid: if of horn, they pay 4 s. $9\frac{45}{100}$ d. the dozen; 4 s. $3\frac{75}{100}$ d. being drawn back: if of ivory or tortoiſe-ſhell, they pay 9 s. $6\frac{90}{100}$ d. the dozen; whereof 8 s. $7\frac{1}{2}$ d. is drawn back. Soap-boxes pay 7 s. $8\frac{40}{100}$ d. the ſhock, containing ſixty boxes. Spice-boxes pay 1 s. $1\frac{86}{100}$ d. the dozen. Tobacco-boxes pay 5 s. $9\frac{30}{100}$ d. the groſs. Touch-boxes, covered with leather, pay only $6\frac{93}{100}$ d. the dozen; but if the leather be the moſt valuable part, they pay 6 s. $11\frac{25}{100}$ d. for every 20 s. value upon oath: if covered with velvet, they pay 2 s. $10\frac{65}{100}$ d. the dozen; and if of iron, or other metal gilt, they pay 3 s. $10\frac{20}{100}$ d. the dozen: in all which caſes, a proportionable draw-back is allowed.

BOX is alſo uſed for an uncertain quantity or meaſure: thus a box of quick-ſilver contains from one to two hundred weight; a box of prunellas, only fourteen pounds; a box of rings for keys, two groſs, *&c.*

BOX *of a plough*, the croſs piece in the head of a plough, which ſupports the two crow-ſtaves. See the article PLOUGH.

BOX, or BOX-TREE, in botany, the engliſh name of the *buxus*. See BUXUS.

The turner, engraver, carver, mathematical inſtrument, comb, and pipe makers, give a great price for this wood by weight, as well as by meaſure. It makes wheels or ſhivers, pins for blocks and pullies, pegs for muſical inſtruments, nut-crackers, weaver's ſhuttles, collar-ſticks, bump-ſticks and dreſſers for ſhoemakers, rulers, rolling-pins, peſtles, mall-balls, beetles, tops, tallies, cheſs-men, ſcrews, bobbins, cups, ſpoons, and the ſtrongeſt of all axle-trees.

BOXERS, a kind of athletæ, who combat or contend for victory with their fiſts, and amount to the ſame with what, among the Romans, were called *pugiles*.

The antient boxers battled with great force and fury, inſomuch as to daſh out each other's teeth, break bones, and often kill each other. The ſtrange diſfigurements theſe boxers underwent were ſuch, that frequently they could not be known, and rendered them the object of many railleries. In the Greek anthology, there are four epigrams of the poet Lucilius, and one of Lucian; wherein their diſfigurements are pleaſantly enough expoſed.

BOXING, the exerciſe of fighting with the fiſts, either naked, or with a ſtone or leaden ball graſped in them: in which ſenſe, boxing coincides with the πυγμιχη of the Greeks, the *pugillatus* of the Romans, and what, on our amphitheatres, is ſometimes called trial of manhood. When the champions had σφαιραι, or balls, whether of lead or ſtone, it was properly denominated σφαιρομαχια.

The antient boxing differed from the *pugna cæſtuum*, in which the combatants had leathern thongs on their hands, and balls to offend their antagoniſts; though this diſtinction is frequently overlooked, and fighting with the cæſtus ranked as a part of the buſineſs of pugiles: in which view, we may diſtinguiſh three ſpecies of boxing; the firſt, where both the hands and the head were abſolutely naked, as is practiſed among us; the ſecond, where the hands were armed with ſpheræ, but the head naked; the third, where the head was armed with a kind of cap or cover, called *amphotides*, chiefly to defend the ears and temples, and the hands alſo furniſhed with cæſtuſes. Boxing is an antient exerciſe, having been in uſe in the heroic times, before the invention of iron or weapons. Thoſe who prepared themſelves for it, uſed all the means that could be contrived to render themſelves fat and fleſhy, that they might be better able to endure blows; whence corpulent men or women were uſually called *pugiles*, according to Terence; *Siqua eſt habitior paulo, pugilem eſſe aiunt*.

BOXING, among ſailors, is uſed to denote the rehearſing the ſeveral points of the compaſs in their proper order.

BOXING is alſo uſed for the tapping of a tree, to make it yield its juice. See the articles BLEEDING, SAP, *&c.*

The boxing of maple is performed by making a hole with an ax or chiſſel into the ſide of the tree, about a foot from the ground; out of it flows a liquor from which ſugar is made.

BOXTEL, a town of dutch Brabant, ſituated on the river Bommel, about eight miles

miles south of Boisleduc, in east longitude 5° 16′, and north latitude 51° 30′.

BOXTHUDE, a town of the dutchy of Bremen, in Germany, about fifteen miles west of Hamburgh, subject to the elector of Hanover: east long. 9° 16′, and north latitude 53° 50′.

BOYAR, a term used for a grandee of Russia and Transylvania.

Becman says, that the boyars are the upper nobility; and adds, that the czar of Muscovy, in his diplomas, names the boyars before the way-wodes. See the article WAY-WODE.

BOYAU, in fortification, a ditch covered with a parapet, which serves as a communication between two trenches. It runs parallel to the works of the body of the place, and serves as a line of contravallation, not only to hinder the sallies of the besieged, but also to secure the miners. But when it is a particular cut that runs from the trenches to cover some spot of ground, it is drawn so as not to be enfiladed, or scoured by the shot from the town.

BOYES, idolatrous priests among the savages of Florida.

Every priest attends a particular idol, and the natives address themselves to the priest of that idol, to which they intend to pay their devotion.

The idol is invoked in hymns, and his usual offering is the smoke of tobacco.

BOYLE'S LECTURES, a course of sermons set on foot, in London, by the honourable Robert Boyle in 1691; the design of which is to prove the truth of the christian religion against infidels, without descending to any controversies among christians.

BOYNE, a river of Ireland, which taking its rise in Queen's county, in the province of Leinster, runs north-east by Trim and Cavan, and falls into the irish channel, a little below Drogheda.

B QUADRO, QUADRATO, or DURALE, in music, called by the French b quarre, from its figure ♮. This is what we call B natural or sharp, in distinction to B mol or flat. See FLATS and SHARP.

If the flat ♭ be placed before a note in the thorough bass, it intimates, that its third is to be minor; and if placed with any cypher over a note in the bass, as ♭6, or ♭5, &c. it denotes, that the fifth or sixth thereto are to be flat. But if the quadro ♮ be placed over any note, or with a cypher, in the thorough bass, it has the contrary effect; for thereby the note or interval thereto is raised to its natural order.

BRABANT, a large province of the Netherlands, lying eastward of Flanders: the greater part of it is subject to the house of Austria, the capital Brussels; and the rest to the Dutch, their capital Breda.

BRABEJUM, in botany, a genus of the tetrandria-monogynia class of plants, the flower of which consists of four linear obtuse petals in the lower part erect, and forming a kind of tube; in the upper turned backward. The fruit is a drupe of the drier kind, of an oval figure and hairy: the kernel is oval.

BRABEUTES, or BRABEUTA, βραβευτης, in antiquity, an officer among the Greeks, who presided at the public games, and decided controversies that happened among the antagonists in the gymnical exercises. The number of brabeutæ was not fixed: sometimes there was only one, but more commonly they amounted to nine or ten.

BRACCIANO, a town of St. Peter's patrimony, about twelve miles north of Rome, situated on the west side of a lake, to which it gives name: east longitude 13°, and north latitude 42°.

BRACE is commonly taken for a couple or pair, and applied by huntsmen to several beasts of game, as a brace of bucks, foxes, hares, &c.

BRACE, in architecture, a piece of timber framed in with bevil joints, the use of which is to keep the building from swerving either way. When the brace is framed into the king-pieces or principal rafters, it is by some called a strut.

BRACES, in the sea-language, are ropes belonging to all the yards of a ship, except the mizen, two to each yard, reeved through blocks that are fastened to pennants, seized to the yard-arms. Their use is either to square, or traverse the yards. Hence to brace the yard, is to bring it to either side. All braces come aftward on, as the main brace comes to the poop, the main-top-sail brace comes to the mizen-top, and thence to the main shrouds: the fore and fore-top-sail braces come down by the main and main-top-sail stays, and so of the rest. But the mizen-bowline serves to brace to the yard, and the cross-jack braces are brought forwards to the main-shrouds when the ship sails close by a wind.

BRACED, in heraldry, a term for the intermingling three chevronels. See plate XXXII. fig. 2.

BRACELET, an ornament worn on the wriſt, much uſed among the antients: it was made of different materials, and in different faſhions, according to the age and quality of the wearer.

Bracelets are ſtill worn by the ſavages of Africa, who are ſo exceſſively fond of them, as to give the richeſt commodities, and even their fathers, wives, and children, in exchange for thoſe made of no richer materials than ſhells, glaſs, beads, and the like.

Bracelets of glaſs pay 3 s. $8\frac{11}{100}$ d. the ſmall groſs, containing twelve bundles or dickers; and, if of the french manufacture, they pay 4 s. $1\frac{26}{100}$ d. for the ſame quantity: a proportionable drawback is allowed in each caſe.

BRACHIÆUS, in anatomy, a name given to two muſcles, which are flexors of the cubitus, and diſtinguiſhed by the appellations of *externus* and *internus*.

The brachiæus *externus* riſes tendinous with two heads; one of them, which is broader, has its origin from the coracoide proceſs; the other, which is ſlender and longer, from the acetabulum of the ſcapula. This deſcends in the channel of the humerus under the ligament of the joint, becomes fleſhy, and joins with the former; and after this, runs near the inſertion of the deltoides in the anterior part of the arm, and ends partly by a round tendon, in the tubercle of the radius, a little below its upper head, and partly by a round tendon, in the common membrane, which ſurrounds all the muſcles of the cubitus. This tendon is ſometimes cut in bleeding, and very bad conſequences attend the accident.

The brachiæus *internus* ariſes juſt below the end of the deltoides, and is inſerted in the tubercle of the ulna, a little below its upper head.

BRACHIAL, in a general ſenſe, denotes ſomething belonging to the arm. See the article ARM.

BRACHIAL-NERVE. See the article NERVE.

BRACHIALIS is particularly uſed for a thick and broad muſcle of the arm, lying between the ſhoulder-bone and the elbow; its fore-part being covered all the way by the two fleſhy bodies of the biceps. See the article BICEPS.

BRACHIONUS, in zoology, the name given by Dr. Hill, to a genus of animalcules, called, in engliſh, wheel-animals. See WHEEL-ANIMALS.

BRACHIUM, ARM, in anatomy, one of the ſuperior extremities of the human body, comprehending the ſcapula, the os humeri, the cubit, and the hand. See the articles SCAPULA, ARM, &c.

BRACHMANS, a ſect of indian philoſophers, known to the antient Greeks by the name of gymnoſophiſts. The antient brachmans lived upon herbs and pulſe, and abſtained from every thing that had life in it. They lived in ſolitude without matrimony, and without property; and they wiſhed ardently for death, conſidering life only as a burden. The modern brachmans make up one of the caſts or tribes of the banians. They are the prieſts of that people, and perform their office of praying and reading the law, with ſeveral mimical geſtures, and a kind of quavering voice. They believe, that, in the beginning, nothing but God and the water exiſted, and that the ſupreme being, deſirous to create the world, cauſed the leaf of a tree, in the ſhape of a child playing with its great toe in its mouth, to float on the water. From its navel there iſſued out a flower, whence Brama drew his original, who was intruſted by God with the creation of the world, and preſides over it with an abſolute ſway. They make no diſtinction between the ſouls of men and brutes, but ſay the dignity of the human ſoul conſiſts in being placed in a better body, and having more room to diſplay its faculties. They allow of rewards and puniſhments after this life; and have ſo great a veneration for cows, that they look on themſelves as bleſſed, if they can but die with the tail of one of them in their hand. They have preſerved ſome noble fragments of the knowledge of the antient brachmans. They are ſkilful arithmeticians, and calculate, with great exactneſs, eclipſes of the ſun and moon. They are remarkable for their religious auſterities. One of them has been known to make a vow, to wear about his neck a heavy collar of iron for a conſiderable time: another to chain himſelf by the foot to a tree, with a firm reſolution to die in that place: and another to walk in wooden ſhoes ſtuck full of nails on the inſide. Their divine worſhip conſiſts chiefly of proceſſions, made in honour of their deities. They have a college at Banara, a city ſeated on the Ganges.

BRA-

BRACHURUS, the name of a genus of animalcules, with tails ſhorter than their bodies, and no viſible limbs.

BRACHYGRAPHY, the art of ſhort-hand-writing. See TACHYGRAPHY.

In England we have various methods of ſhort-hand, and thoſe eaſier, ſpeedier, and more commodious, than are known in any other part of the world, witneſs Webſter's, Weſton's, MacAulay's, and ſeveral other ſhort-hands.

BRACHYPYRENIA, in the hiſtory of foſſils, a genus of *ſeptariæ*, with a ſhort roundiſh nucleus. See SEPTARIÆ.

BRACHYTELOSTYLA, in natural hiſtory, the name by which Dr. Hill calls thoſe cryſtals, which are compoſed of a ſhort hexangular column, terminated at each end by an hexangular pyramid. See the article CRYSTAL.

BRACKET, among carpenters, *&c.* a kind of wooden ſtay, ſerving to ſupport ſhelves, and the like.

BRACKETS, in a ſhip, the ſmall knees, ſerving to ſupport the galleries, and commonly carved. Alſo the timbers that ſupport the gratings in the head, are called brackets.

BRACKETS, in gunnery, are the cheeks of the carriage of a mortar: they are made of ſtrong planks of wood, of almoſt a ſemicircular figure, and bound round with thick iron plates; they are fixed to the beds by four bolts, which are called bed-bolts; they riſe up on each ſide of the mortar, and ſerve to keep her at any elevation, by means of ſome ſtrong iron bolts, called bracket-bolts, which go through theſe cheeks or brackets.

BRACKLAW, the capital of the palatinate of Bracklaw, in Podolia, in Poland, ſituated on the river Bog, an hundred and ten miles eaſt of Kaminec: eaſt long. 29° 20′, and north lat. 48°.

BRACKLEY, a borough town of Northamptonſhire, about fifteen miles ſouth-weſt of Northampton: weſt longitude 1° 15′, and north latitude 52°.

It ſends two members to parliament.

BRACTEA, in natural hiſtory, denotes a ſpangle, or thin flake of any ſubſtance.

BRACTEA, in botany, denotes the floral leaf.

BRACTEARIA, in natural hiſtory, a genus of talcs, compoſed of ſmall plates in form of ſpangles, each plate being either very thin, or fiſſile into very thin ones.

Of this genus there are a great many ſpecies, called, from their different colours, *mica aurea*, or gold-glimmer; and *mica argentea*, ſilver-glimmer, or cat's-ſilver, *&c.*

BRAD, in geography, a town of Sclavonia, ſituated on the north ſide of the river Save, eighteen miles ſouth of Poſega: eaſt longitude 18° 40′, and north latitude 45° 20′.

BRADFIELD, a market-town in Eſſex, fourteen miles north of Chelmsford; eaſt long. 30′, and north lat. 51° 54′.

BRADFORD, a market-town in Wiltſhire, about nine miles weſt of the Devizes: eaſt longitude 2° 40′, and north latitude 51° 20′.

BRADFORTH, a market-town of Yorkſhire, thirty miles ſouth-weſt of York: weſt long. 1° 35′, and north lat. 53° 40′.

BRADNICH, a market-town of Devonſhire, ten miles north of Exeter: weſt long. 3° 35′, and north lat. 50° 45′.

BRADS, among artificers, a kind of nails uſed in building, which have no ſpreading head, as other nails have. They are diſtinguiſhed, by ironmongers, by ſix names, as joiner's-brads, flooring-brads, batten-brads, bill-brads, or quarter-heads, *&c.* Joiner's-brads are for hard wainſcot, batten-brads for ſoft wainſcot; bill-brads are uſed when a floor is laid in haſte, or for ſhallow joiſts ſubject to warp. See the article NAILS.

BRADYPUS, in zoology, a genus of quadrupeds, of the order of the anthropomorpha of Linnæus, otherwiſe called *ignavus*, and in engliſh the ſloath; the characters of which are, that its feet have no great toe, and are made for climbing. See the article ANTHROPOMORPHA.

Of this genus there are two ſpecies. 1. The american ſloath, with a ſhort tail, and only three toes on each foot. 2. The ceylon ſloath, with only two toes on each foot, and no tail. See the article SLOATH.

BRAG, an ingenious and pleaſant game at cards, wherein as many may partake as the cards will ſupply; the eldeſt hand dealing three to each perſon at one time, and turning up the laſt card all round. This done, each gameſter puts down three ſtakes, one for each card. The firſt ſtake is won by the beſt card turned up in the dealing round; beginning from the ace, king, queen, knave, and ſo downwards. When cards of the ſame value are turned up to two or more of the gameſters, the eldeſt hand gains; but it is to be obſerved, that the ace of diamonds wins, to whatever hand it be turned up.

The ſecond ſtake is won by what is called the brag, which conſiſts in one of the gameſters challenging the reſt to produce cards equal to his: now it is to be obſerved, that a pair of aces is the beſt brag, a pair of kings the next, and ſo on; and a pair of any ſort wins the ſtake from the moſt valuable ſingle card. In this part conſiſts the great diverſion of the game; for, by the artful management of the looks, geſtures, and voice, it frequently happens, that a pair of fives, treys, or even duces, out-brags a much higher pair, and even ſome pairs royal, to the no ſmall meriment of the company. The knave of clubs is here a principal favourite, making a pair with any other card in hand, and with any other two cards a pair royal.

The third ſtake is won by the perſon, who firſt makes up the cards in his hand one and thirty; each dignified card going for ten, and drawing from the pack, as uſual in this game.

BRAGA, the capital of the province of Entre-minho-duro, in Portugal, ſituated on the river Cavado, thirty-two miles north of Porto: weſt longitude 8° 40′, and north latitude 41° 20′.

BRAGANZA, a city of the province of Traloſmontes, in Portugal, ſituated on the river Sabor, in 7° weſt longitude, and 41° 50′ north latitude.

BRAGGOT, a kind of drink made of malt, honey, and ſpices, much uſed in Wales.

BRAIL, or BRAILS, in a ſhip, are ſmall ropes made uſe of to furl the ſails acroſs: they belong only to the two courſes and the mizen-ſail; they are reeved through the blocks, ſeized on each ſide the ties, and come down before the ſail, being at the very ſkirt thereof faſtened to the cringles; their uſe is, when the ſail is furled acroſs, to hale up its bunt, that it may the more eaſily be taken up or let fall. Hale up the brails, or brail up the ſail, that is, hale up the ſail, in order to be furled or bound cloſe to the yard.

BRAILOW, a town of Podolia, in Poland, ſituated on the river Bog, forty miles north of Bracklaw: eaſt longitude 29°, and north latitude 48° 50′.

BRAIN, in anatomy, that ſoft white maſs incloſed in the cranium or ſkull, in which all the organs of ſenſe terminate, and the ſoul is ſuppoſed principally to reſide.

The brain is ſurrounded by three membranes, called menynges and matres; theſe are the dura mater, the arachnoides, and the pia mater. See the article DURA MATER, &c.

The general maſs is divided into three parts or portions, the cerebrum, or brain properly ſo called, the cerebellum, and the medulla oblongata; to theſe three parts, contained with the cranium, ſome add a fourth, *viz.* the medulla ſpinalis, which is a continuation of the medulla oblongata. See CEREBELLUM, &c.

The cerebrum, or brain properly ſo called, is a maſs of a moderate conſiſtence, and of a greyiſh colour on the outer ſurface; the upper part is of an oval figure: it is flatter on the lower part, each lateral half of which is divided into three eminences, called lobes; one anterior, one middle, and one poſterior. It is divided into two hemiſpheres, by means of the proceſſus falciformis of the dura mater, and theſe again are divided into the anterior and poſterior lobes, between which there is a large inferior protuberance that goes by the ſame name; ſo that, in each hemiſphere, there are three lobes; one anterior, one middle, and one poſterior.

Each lateral portion of the cerebrum has three ſides; one ſuperior, which is convex; one inferior, which is uneven; and one lateral, which is flat, and turned towards the falx: through the whole ſurface of theſe three ſides, we ſee inequalities or windings, like the circumvolutions of the inteſtines, formed by waving ſtreaks or furrows, very deep and narrow, into which the ſepta of the pia mater inſinuate themſelves.

The human brain is, in general, ſo large as to weigh about four pounds. It is three times as much, in quantity, as the brain of an ox. Its ſubſtance, on cutting a part of it, is found to be of two kinds; the exterior, or cortical part; and the interior, or medullary part. The cortical part of the brain is about a ſixth of an inch in thickneſs; the ſtructure of the interior part is fibrous, and tubular. This laſt has its origin from the extremely ſmall arteries of the exterior or cortical part: and its termination is the beginning of the nerves: it is ſomewhat harder than the cortical part.

In taking the brain carefully out of the ſkull, there are diſtinguiſhed, in the lower part of the medulla oblongata, the nerves of the brain, which are commonly ſaid to be ten pair, though, in reality, only nine; they are, for the ſake of memory, reduced

reduced into the form of two latin verſes:

Olfacies, cernens, oculoſque movens, patienſque,
Guſtans, abducens, audienſque, vaganſque, loquenſque.

Remarkable parts of the BRAIN. The moſt remarkable parts of the brain are, 1. The corpus calloſum, which appears between the two hemiſpheres of the cerebrum. 2. The ventricles of the brain, in the examination of which we are to obſerve the ſeptum lucidum, the fornix, the plexus choroideus, the corpora ſtriata, and the thalami nervorum opticorum. 3. The nates and teſtes; and under theſe the valvula magna cerebri and the aqueduct of Sylvius. For the deſcription of each of which, ſee the article CORPUS CALLOSUM, &c.

Veſſels of the BRAIN. Theſe are, beſides the arteries, veins, and inveſtient membranes, the pituitary gland, the rete mirabile, &c. See the articles PITUITARY GLAND, and RETE MIRABILE.

The uſes of the brain, in general, are, 1. To be of the utmoſt importance and aſſiſtance to the animal functions. 2, To ſecrete the animal ſpirits, and to tranſmit them to the nerves, for the neceſſities of ſenſation and motion.

The cerebrum is ſuppoſed to be particularly conſtructed for the ſecretion of the animal; the cerebellum, for the vital and natural ſpirits. The particular uſes to which the ſeveral parts of the brain are deſtined, are wholly unknown.

BRAIN LE COMPTE, a town of Hainalt, in the Auſtrian Netherlands, fifteen miles ſouth-eaſt of Bruſſels, and nine north-eaſt of Mons: eaſt longitude 4°, and north latitude 50° 40′.

BRAINTREE, a market-town of Eſſex, twelve miles north of Chelmsford: eaſt longitude 35′, and north lat. 51° 50′.

BRAKE denotes female-fern, or the place where it grows: alſo a ſharp bit or ſnaffle for horſes; and a baker's kneading trough: alſo an inſtrument with teeth, to bruiſe flax or hemp.

BRAKEL, a town of the biſhopric of Paderborn, in the circle of Weſtphalia, in Germany: eaſt longitude 9°, and north latitude 51° 40′.

BRAMA, the BREAM, in ichthyology, the name of a freſh-water fiſh, called by authors the cyprinus, with all its fins black, and twenty-ſeven bones in the pinna ani. See plate XXXII. fig. 4. and the article CYPRINUS.

BRAMANT, a town of Savoy, thirty-five miles north-weſt of Turin; eaſt long. 6° 45′, and north lat. 45°.

BRAMBER, a borough-town of Suſſex, about ſixteen miles ſouth-eaſt of Grinſted: weſt long. 15′, and north latitude 50° 50′.

It ſends two members to parliament.

BRAMBLE, or BRAMBLE-BUSH, in botany, the engliſh name of the rubus of authors. See the article RUBUS.

BRAMBLE-NET, otherwiſe called hallier, is a net to catch birds in, of ſeveral ſizes; the great maſhes muſt be four inches ſquare; thoſe of the leaſt ſize are three or four inches ſquare; and thoſe of the biggeſt five. In the depth, they ſhould not be above three or four inches; but as for the length, they may be enlarged at pleaſure; the ſhorteſt being eighteen feet long.

BRAMBLE, or BRAMBLING, in ornithology, the engliſh name of a bird, called by authors montifringilla. See the article MONTIFRINGILLA.

BRAMINS, the name of the prieſts among the idolatrous Indians; the ſucceſſors of the antient brachmans. See the article BRACHMANS.

BRAMPORE, a town of the hither peninſula of India: eaſt longitude 77°, and north latitude 21° 30′.

BRAMPTON, a market-town of Cumberland, about ſix miles north-eaſt of Carliſle: weſt longitude 2° 40′, and north latitude 54° 50′.

BRAMYARD, a market-town of Herefordſhire, about twelve miles north-eaſt of Hereford: weſt longitude 2° 30′, and north latitude 52° 20′.

BRAN, the ſkins or huſks of corn, eſpecially wheat ground, ſeparated from the flour by a ſieve or boulter.

It is of wheat-bran that ſtarch-makers make their ſtarch. The dyers reckon bran among the non-colouring drugs, and uſe it for making, what they call, the ſour waters, with which they prepare their ſeveral dyes.

Bran, being of a porous ſpungy ſubſtance, is uſed, in pharmacy, as a ſuppurative and digeſtive medicine. In the compoſition of a cataplaſm, the warmth of the part it is applied to, ſo rarefies the bran, that, being kept from the external air, all, that can tranſpire, will be ſucked up into its interſtices. However, it ſhould be applied, where there is good probability of the matter's tranſpiring; otherwiſe it will draw more to the part, and thereby increaſe the malady.

BRANCH,

BRANCH, in botany, an arm of a tree, or a part, which, ſprouting out from the trunk, helps to form the head or crown thereof.

As branches have their outward parts common with the chief ſtem, ſo, in like manner, do their inward conſiſt of a multitude of tubes, which are alſo provided with a number of ſmall glands, veins, and muſcles interſperſed here and there, where the ſap, coming from the firſt canal, is rendered much more delicate.

Branches are diſtinguiſhed into various kinds: 1. Wood-branches, which are thoſe that form the ſhape of the tree, and are to be pruned from four to twelve inches, according to the vigour of the tree. 2. Fruit-branches, which are ſlenderer than the wood-branches, and have their eyes near to one another and large, by which the fruit-buds are formed. If they are too long, they are to be topped; but if they are of a juſt length, they are to be preſerved, only juſt cutting off the extremity. 3. Branch-half-wood, that which, being too ſlender for a wood-branch, and too big for a fruit-branch, is cut off at the length of two or three inches, to make it produce a better ſhoot, whether wood or fruit. 4. Irregular branches, which are ſmall and confuſed. They muſt be cut off, becauſe they are neither fit for wood nor fruit. 5. Branches of falſe-wood. Theſe are ſuch as grow upon the true wood branches, and have flat eyes at a diſtance one from another; for which reaſon they are uſeleſs, and therefore muſt be cut off. 6. Luxuriant branches, which are ſuch as ſhoot out from the large wood-branches. Theſe are as taper and as big about as one's finger, the back being ſmooth and even, and having broad eyes at a diſtance from one another. Theſe muſt all be cut off. 7. Spurious wood-branches, ſuch as come contrary to the order of nature; or otherwiſe than from the cuts of the preceding year, or which, coming on ſuch cuts, are big in the place where they ſhould be ſmall.

The diſtinguiſhing marks of good branches are, that the eyes, in the whole extent, be thick, well fed, and very cloſe one to another. The good ſtrong branches are employed in producing yearly, on their extremities, other new branches, ſome ſtrong and others weak. The good weak branches are, ſuch as are well placed, and, being of a mean thickneſs and length, may be able to produce, ſpeedily, beautiful and good fruit.

The diſtinguiſhing marks of bad branches are, when, in the lower part, the eyes are flat, ill fed, and hardly formed, and at a large diſtance one from another.

BRANCH is likewiſe a term uſed in genealogy and anatomy. Thus we ſay, the branch of a family, the branch of an artery, the branch of a vein.

BRANCHES *of a bridle*, in the manege, are two pieces of iron bended, which, in the interval, between the one and the other, bear the bit-mouth, the croſs-chains, and the curb; ſo that on one end they anſwer to the head-ſtall, and on the other to the reins, in order to keep the horſe's head in ſubjection. With regard to their form and ſtructure, branches are either ſtrait, in form of a piſtol, for young horſes to form their mouth; or, after the conſtable of France's faſhion, proper for a horſe that carries his head well. Some are in form of a gigot or leg, which will prevent horſes from carrying too low: ſome in form of a bent knee, contrived for horſes that arm themſelves againſt the operation of the bit; and others after the french faſhion, which is hardly about $\frac{1}{2}$ of an inch at the ſevil hole, and kneed $1\frac{1}{2}$ inch at the jarret or ham.

It is to be obſerved, 1. That the farther the branch is from an horſe's neck, the more effect it will have. 2. That ſhort branches *cæteris paribus* are ruder, and their effects more ſudden, than thoſe of longer. 3. That the branch is to be proportioned to the length of a horſe's neck; and one may ſooner err in chuſing one too ſhort than too long.

BRANCHES *of ogives*, in architecture, are the arches of gothic vaults. Theſe arches traverſing from one angle to another diagonal wiſe, form a croſs between the other arches, which make the ſides of the ſquare, of which the arches are diagonals.

BRANCH *of a trench*. See BOYAU.

BRANCH *of a mine*. See GALLERY.

BRANCHERY, in the anatomy of plants, denotes the ramifications of the ſucciferous veſſels diſperſed through the parenchyma, or pulpy part of fruits.

The main branches are uſually twenty in number; one half, or fifteen, being diſtributed over the parenchyma, and the reſt, running from the ſtalk in a ſtraight line, meet the former at the cork or ſhoot of the flower: to theſe laſt the coats of the kernels are faſtened.

BRANCHIÆ, GILLS, in the anatomy of fiſhes, the parts correſponding to the lungs of land-animals, by which fiſhes take

take in and throw out again a certain quantity of water, impregnated with air. All fiſhes, except the cetaceous ones and the petromyzum, are furniſhed with theſe organs of reſpiration; which are always eight in number, four on each ſide the throat. That next the heart is always the leaſt, the reſt increaſing in order as they ſtand near the head of the fiſh.

Each of theſe gills is compoſed of a bony lamina, in form of a ſemicircle, for the moſt part; and on its convex ſide ſtand the leaves or lamellæ, like ſo many ſickles. The whole convex part of the lamellæ is beſet with hairs, which are longeſt near the baſe, and decreaſe gradually as they approach towards the point. There are alſo hairs on the concave ſide of the lamellæ, but ſhorter than the others, and continued only to its middle.

The convex ſide of one lamina, is fitted into the concave ſide of the next ſuperior one; and all of them are connected together by means of a membrane, which reaches from their baſe half way their height, where it grows thicker, and in ſome meaſure reſembles a rope. The reſt of the lamina is free, and terminates in a very fine and flexible point.

As to the uſe of theſe gills, they ſeem to be deſigned to receive the blood protruded from the heart into the aorta, and convey it into the extremities of the lamellæ; from whence being returned by veins, it is diſtributed over the body of the fiſh.

BRANCHIARUM FORAMINA, *apertures of the gills*. In moſt fiſhes there is only one aperture; in the cartilaginous ones, theſe apertures are ten in number, five on each ſide; and in the petromyzon or lamprey, there are no leſs than fourteen of theſe apertures, ſeven on each ſide.

As to the cetaceous fiſhes, they have no aperture of this kind; and the reaſon ſeems to be, becauſe they are furniſhed with lungs.

BRANCHIDÆ, in grecian antiquity, prieſts of the temple of Apollo, which was at Didymus in Ionia, a province of leſſer Aſia, towards the Ægean ſea, upon the frontiers of Caria. They opened to Xerxes the temple of Apollo, the riches whereof he took away. After which, thinking it unſafe to ſtay in Greece, they fled to Sogdiana, on the other ſide of the Caſpian ſea, upon the frontiers of Perſia, where they built a city, called by their own name: but they did not eſcape the puniſhment of their crime: for Alexander the great having conquered Darius, king of Perſia, and being informed of their treachery, put them all to the ſword, and razed their city, thus puniſhing the impiety of the fathers in their poſterity.

BRANCHIOSTEGI, in ichthyology, one of the five general orders of fiſhes, whereof the rays of the fins are indeed bony, like thoſe of the malacopterygii and acanthopterygii; from which, however, they are diſtinguiſhed by having no bones, or oſiculæ, in the branchiæ or gills.

Of this order there are only four genera, *viz.* the baliſtes, oſtracion, cyclopterus, and lophius. See BALISTES, *&c.*

BRANCHON, a town of the Auſtrian Netherlands, about eight miles north of Namur; eaſt longitude 4° 50′, and north latitude 50° 32′.

BRANCHUS, βραγχος, a defluxion of humours upon the fauces, being a ſpecies of catarrh. See the article CATARRH.

BRAND-HERRING, a kind of herring catched by the Dutch. It pays no duty of importation in Holland; and for exportation, it pays two livres and ten ſivers *per* laſt of 12 tuns, according to the new book of rates made in Holland in the year 1725.

BRANDEIS, a town of Bohemia, ſituated on the river Elbe, ten miles north-eaſt of Prague: eaſt longitude 14° 25′, north latitude 50° 15′.

BRANDENBURG, a city of the marquiſate of Brandenburg, in Germany, ſituated on the river Havel, twenty-ſix miles weſt of Berlin: eaſt longitude 13°, north latitude 52° 25′.

It was once the capital of Brandenburg; but is now on the decline, ſince Berlin ſupplanted it.

BRANDON, a market town of Suffolk, ten miles north of Bury: eaſt longitude 45′, north latitude 52° 30′.

It gives the title of duke to his grace the duke of Hamilton.

BRANDY, a ſpirituous and inflammable liquor, extracted from wine and other liquors, by diſtillation, which is moſt commonly performed by the *balneum mariæ*; but ſometimes alſo by a ſmall flaming fire. See DISTILLATION.

The veſſels uſed in this operation, are commonly of copper; ſome diſtillers, in order to cool the brandy, make the neck of the matraſs, which is very long, and of a ſerpentine or winding figure, paſs through a tun of cold water.

In order to diſtil brandy, they fill the cucurbi

cucurbit half full with the liquor they would extract it from, which they put over a moderate fire, till about the ſixth part of it be diſtilled, or till they perceive that which falls into the recipient, is no longer inflammable. Brandy diſtilled a ſecond time, is called ſpirit of wine; and this ſpirit, purified again by one or by ſeveral diſtillations, is what they call ſpirit of wine rectified. The ſecond diſtillation is made in the *balneum mariæ*, and in a glaſs cucurbit, till the brandy that was put into it be reduced into one half, and this half is again rectified, as often as the operator thinks proper. To try the goodneſs of the rectified ſpirit of wine, you muſt examine whether, when lighted into a blaze, it conſumes entirely, without leaving any impurity behind: or rather, which is ſurer ſtill, whether, having put ſome gunpowder at the bottom of the ſpirit you would try, the powder takes fire, when the ſpirit is conſumed; in which caſe, the ſpirit is good. With regard to brandy (we ſpeak only of that which is diſtilled from wine) they who trade in it, chuſe it white, clear, of a good taſte, and ſuch as will bear the teſt or proof; that is to ſay, that when poured into a glaſs, it forms on the top of it a little white lather, which, as it diminiſhes, makes a circle; there being no brandy but that which is well deflegmated, and does not retain too much humidity, wherein this bead-proof, as it is called, will be entirely formed.

The chief uſe of brandy is as a drink, particularly in the northern countries, among the negroes of Guinea, who will ſell one another for ſome bottles of brandy, and among the ſavages of Canada, who are extremely fond of it, but to whom the French are forbidden to give any, under very ſevere penalties: brandy is alſo uſed in medicine, to ſtrengthen the nerves; and in dying, rectified ſpirits of wine being reckoned by the dyers among the non-colouring drugs.

Method of colouring BRANDY. All brandies, when firſt made, are as clear as water, and do grow higher coloured by long keeping; however, they are artfully made of any colour ſeveral ways. To make a light ſtraw-colour, uſe turmeric, or a little treacle: but the beſt way is to give it a colour or tincture with a little burnt ſugar, made to a conſiſtence; or ſyrup of elder-berries may be uſed, which gives an admirable colour, and may be made deeper or lighter, according to the quantity you put in.

Beſides the brandy made of wine, there is ſome alſo made of beer, cyder, ſyrups, ſugar, molaſſes, fruit, grain, &c. however, theſe are not properly called brandy; but go under the general denomination of ſpirits, which ſee; ſee alſo the articles RUM, RACK, &c.

Wine brandy made in France, is eſteemed the beſt in Europe. They make it wherever they make wine, and for that purpoſe, uſe wine that is pricked, rather than good wine. The chief brandies for foreign trade, and thoſe accounted beſt, are the brandies of Bourdeaux, Rochelle, Cogniac, Charenton, the iſle of Rhe, Orleans, the country of Blaſois, Poictou, Touraine, Anjou, Nantes, Burgundy, and Champaign.

BRASIDIA, an anniverſary ſolemnity at Sparta, in memory of Braſidas, a lacedæmonean captain, famous for his atchievements at Methone, Pylos, and Amphipolis. It was celebrated with ſacrifices and games, wherein none were permitted to contend, but free-born Spartans. Whoever neglected to be preſent at the ſolemnity, was fined.

BRASIL, or BRAZIL, a large maritime country of South America, lying between 35° and 60° weſt longitude, and between the equator and 35° ſouth latitude.

It is bounded by the Atlantic ocean and the river Amazon on the north, by the ſame ocean on the eaſt, by the river of Plate on the ſouth, and by Paraguay on the weſt; being computed to be 2500 miles in length, and 700 miles in breadth. The Portugueſe have now the ſole dominion of this extenſive country, where beſides ſugar and tobacco, there are rich mines of gold and diamonds; from whence his Portugueſe majeſty draws a very conſiderable revenue.

BRASIL-WOOD, or BRAZIL-WOOD, an american wood of a red colour, and very heavy. It is denominated variouſly, according to the places from whence it is brought: thus we have braſil from Fernambuco, Japan, Lamon, &c.

The braſil-tree ordinarily grows in dry barren places, and even in the clifts of rocks: it is very thick and large, uſually crooked and knotty: its flowers, which are of a beautiful red, exhale a very agreeable ſmell, which ſtrengthens the brain. Though the tree be very thick, it is covered with ſo groſs a bark, that when the ſavages have taken it off, the wood or trunk, which was before the thick-

neſs of a man, is ſcarce left equal to that of his leg.

This wood muſt be choſen in thick pieces, cloſe, ſound, without any bark on it, and ſuch as, upon ſplitting, of pale becomes reddiſh, and, when chewed, has a ſaccharine taſte. It is much uſed in turned work, and takes a good poliſh: but its chief uſe is in dying, where it ſerves for a red colour: it is a ſpurious colour, however, that it gives, and eaſily evaporates and fades; nor is the wood to be uſed without alum and tartar. From the braſil of Fernambuco, is drawn a kind of carmine, by means of acids: there is alſo a liquid lacca made of it, for miniature.

This tree has many diſtinctions among botaniſts: but it is agreed on by all to be a ſpecies of the ſaunders, and poſſeſſed of the ſame phyſical virtues; tho' it is ſeldom or ever preſcribed by phyſicians.

BRASLAW, the capital of a palatinate of the ſame name, in the province of Lithuania in Poland: eaſt longitude 26°, north latitude 56° 20′.

BRASS, or as the French call it, yellow copper, is a factitious metal, made of copper and lapis calaminaris.

The method of preparing it is as follows: the lapis, having been calcined and ground fine as flour, is mixed with fine charcoal, and incorporated, by means of water, into a maſs: this being done, about ſeven pounds of lapis calaminaris is put into a melting pot, that will contain about a gallon, and over that about five pounds of copper; this pot is let down into a wind-furnace, where it remains for eleven hours, in which time it is converted into braſs. The metal then is caſt, either into plates or lumps; forty-five pounds of crude lapis calaminaris, will produce thirty pounds when calcined or burnt. Sometimes braſs-ſhruff is uſed inſtead of copper: but that is not always to be procured in quantities ſufficient, it being no other than a collection of old braſs.

Pure braſs is not malleable, unleſs when it is hot; for when it is cold it will break; and after it has been melted twice, it will be no longer in a condition to bear the hammer at all: but in order to render it capable of being wrought, they put ſeven pounds of lead to an hundred weight of braſs, which renders it more ſoft and pliable.

Braſs, manufactured into any kind of utenſils, pays duty on importation $3\frac{5}{60}$d. the pound; whereof $3\frac{4}{60}$d. is repaid on exportation of the ſame goods.

The beſt proportion for braſs guns, is ſaid to be a thouſand pounds of copper, nine hundred pounds of tin, and ſix hundred pounds of braſs, in eleven or twelve thouſand weight of metal.

The beſt braſs guns are made of malleable metal, not of pure copper and calamine alone; but worſe metals are uſed to make it run cloſer and ſounder, as lead, and pot-metal. See CANNON.

Corinthian BRASS has been famous in antiquity, and is a mixture of gold, ſilver, and copper. L. Mummius having ſacked and burnt the city of Corinth, 146 years before Chriſt, it is ſaid this metal was formed from the immenſe quantities of gold, ſilver and copper wherewith that city abounded, thus melted and run together by the violence of the conflagration.

BRASS-COLOUR, one prepared by the braziers and colourmen to imitate braſs. There are two ſorts of it, the red braſs, or bronze, and the yellow or gilt-braſs: the latter is made only of copper-filings, the ſmalleſt and brighteſt that can be found; with the former they mix ſome red ochre, finely pulverized: they are both uſed with varniſh.

BRASSE, in ichthyology, the engliſh name of the lucioperca, or pale, ſpotted pearch, with two long teeth on each ſide. See the article LUCIOPERCA.

BRASSICA, CABBAGE, in botany, a genus of the tetradynamia-ſiliquoſa claſs of plants; the flower of which is cruciform, conſiſting of four petals, almoſt of the ſame length with the cup. The fruit is a bivalve pod, containing globoſe ſeeds. See the article CABBAGE.

BRAUNSBURG, a town of Pruſſia, ſituated on the Baltic ſea, about thirty miles ſouth-weſt of Koningſburg; eaſt long. 20°, north lat. 54° 15′.

BRAVO, one of the Cape-verd iſlands: weſt long. 25°, north lat. 14°.

BRAURONIA, in grecian antiquity, a feſtival in honour of Diana, ſurnamed brauronia, from its having been obſerved at Brauron, an athenian village.

This feſtival was celebrated once in five years, being managed by ten men, called *ἐφηβοι*. The victim offered in ſacrifice was a goat, and it was cuſtomary for certain men to ſing one of Homer's Iliads. The moſt remarkable perſons at this ſolemnity were young virgins, from

five to ten years of age, habited in yellow, and conſecrated to Diana.

BRAWN, the fleſh of a boar ſouced or pickled: for which end the boar ſhould be old; becauſe the older he is, the more horny will the brawn be.

The method of preparing brawn, is as follows: the boar being killed, it is the flitches only, without the legs, that are made brawn; the bones of which are to be taken out, and then the fleſh ſprinkled with ſalt, and laid in a tray, that the blood may drain off: then it is to be ſalted a little, and rolled up as hard as poſſible. The length of the collar of brawn, ſhould be as much as one ſide of the boar will bear; ſo that when rolled up, it be nine or ten inches diameter.

The collar being thus rolled up, is to be boiled in a copper, or large kettle, till it is ſo tender, that you can run a ſtraw through it: then ſet it by, till it is thorough cold, and put it into the following pickle. To every gallon of water, put a handful or two of ſalt, and as much wheat bran: boil them together, then drain the bran as clear as you can from the liquor; and when the liquor is quite cold, put the brawn into it.

BRAY, a town of Champaign in France, about ſixteen miles north of Sens: eaſt long. 3° 20′, north lat. 48° 25′.

BRAY is alſo the name of a port-town of the county of Wicklow, and province of Leinſter, in Ireland: weſt long. 6° 16′, north lat. 53° 12′.

BRAZIER, an artificer who makes or deals in all kinds of braſs-ware. See BRASS.

BRAZIL, or BRASIL. See BRASIL.

BRAZING, the ſouldering or joining two pieces of iron together by means of thin plates of braſs, melted between the pieces that are to be joined. If the work be very fine, as when two leaves of a broken ſaw are to be brazed together, they cover it with pulverized borax, melted with water, that it may incorporate with the braſs powder, which is added to it: the piece is then expoſed to the fire without touching the coals, and heated till the braſs is ſeen to run.

Brazing is alſo uſed for the joining two pieces of iron together by beating them hot, the one upon the other, which is uſed for large pieces by farriers, *&c.*

BRAZZA, a town and iſland on the coaſt of Dalmatia, in the gulph of Venice: eaſt longitude 18°, north latitude 43°.

BREACH, in fortification, a gap made in any part of the works of a town by the cannon or mines of the beſiegers, in order to make an attack upon the place. To make the attack more difficult, the beſieged ſow the breach with crow-feet, or ſtop it with chevaux de frize.

A practicable breach, is that where the men may mount and make a lodgment, and ought to be fifteen or twenty fathoms wide. The beſiegers make their way to it, by covering themſelves with gabions, earth-bags, *&c.*

BREACH, in a legal ſenſe, is where a perſon breaks through the condition of a bond or covenant, on an action upon which, the breach muſt be aſſigned: and this aſſignment muſt not be general, but particular, as in an action of covenant for not repairing houſes, it ought to be aſſigned particularly what is the want of reparation; and in ſuch certain manner, that the defendant may take an iſſue.

Pound BREACH. See the article POUND.

BREAD, *panis*, a maſs of dough, kneaded and baked in an oven. See the article BAKING.

Bread ought to be well kneaded and ſeaſoned with a little ſalt, otherwiſe it is accounted very unwholeſome.

We find bread ſometimes made of rye, oats, barley, or vetch-flour; but of all others, that prepared from wheat affords the moſt wholeſome nouriſhment. In ſeveral parts of Aſia, Africa, and America, they make bread of maiz-flour; beſides which, the americans make bread of the caſſava-root.

Some are of opinion, that corn growing in gravelly and light lands, makes better bread than that which grows in deep and low grounds.

As to the aſſize of bread, the mayors of cities and other corporations, or two juſtices of the peace, have power to ſettle it; and bakers treſpaſſing againſt it, forfeit 5 *s. per* ounce for every ounce wanting, and 2 *s.* 6 *d.* for leſs than an ounce.

French-BREAD. To make good french-bread, for every two quarts of flour, add ſix ſpoonfuls of ale-yeaſt; alſo milk and water, warmed; a bit of butter, and a little ſalt: make them pretty light, and letting them riſe before the fire, bake them in a quick oven.

Some put the yolks of ſix eggs, and the whites of two to this quantity; but others think the bread better without them.

Foreign bread, or biſket, pays duty on importation 1 *s.* $7\frac{23}{100}$ *d.* for every 112 *lb.* whereof 1 *s.* $5\frac{23}{100}$ *d.* is repaid on exporting it again.

BREAD-

BREAD-ROOM, in a ſhip, that deſtined to hold the bread, or biſket.

The boards of the bread-room ſhould be well joined and caulked, and even lined with tin plates, or mats. It is alſo proper to warm it well with charcoal, for ſeveral days before the biſket is put into it; ſince nothing is more injurious to the bread than moiſture. See BISKET.

BREAD, in the ſcripture ſtile, is taken for every ſort of food: the antient Hebrews had ſeveral ways of baking bread, as baking it under the aſhes, between two fires made of cow-dung, and in an oven. The Jews had, beſides their leavened and unleavened bread, their ſhew-bread, bread of affliction, &c.

BREADTH, in geometry, one of the three dimenſions of bodies, which multiplied into their length, conſtitutes a ſurface. See the article SURFACE.

BREAK, in a general ſenſe, ſignifies to divide a thing into ſeveral parts with violence.

In the art of war, to break ground, is to open the trenches before a place. See the article TRENCHES.

Among ſportſmen, to break a horſe in trotting, is to make him light upon the hand in trotting, in order to make him fit for a gallop. To break a horſe for hunting, is to ſupple him, to make him take the habit of running.

BREAKING, in a mercantile ſtile, denotes the not paying one's bills of exchange, accepted, or other promiſſory notes, when due; and abſconding, to avoid the ſeverity of one's creditors. In which ſenſe, breaking is the ſame thing with becoming bankrupt. See BANKRUPT.

BREAKING BULK, in the ſea-language, is the ſame with unlading part of the cargo.

BREAM, *brama*, in ichthyology. See the article BRAMA.

This fiſh is eaſily taken; for after two or three gentle turns, it falls on its ſide, and may be drawn to land with eaſe.

The beſt time of angling for bream, is from St. James's day till Bartholomew-tide, as being then exceeding fat; and the moſt proper bait, is the largeſt red garden worms that can be got.

BREAST, *pectus*, in anatomy, denotes the fore-part of the thorax. See the article THORAX.

BREASTS, *mammæ*, two glandulous tumours, of a roundiſh oval figure, ſituated on the anterior, and a little towards the lateral parts of the thorax: theſe are moſt remarkable in women; and in order to their being an ornament, they ſhould be of a moderate ſize, their ſkin ſhould be white and ſoft, their ſubſtance firm, not flaccid or pendulous, and the nipple red; they ſhould alſo ſtand at a conſiderable diſtance. In different perſons, however, their ſize is very various and uncertain. In virgins, they are uſually ſmall: in women with child, or who give ſuck, they are larger, often very enormous. In very young, and very old perſons, they are always ſmall. The time of the breaſts growing full, in women, is about the age of fourteen; and the moſt natural time of their decreaſing, is about the fiftieth year. The nipple of the human breaſt is a tumid, cylindrical body, of a red colour, placed on the middle of the breaſt, and ſurrounded with a circle: its ſubſtance is cavernous, almoſt like that of the human penis; and hence it is capable of erection. See the article NIPPLES.

The breaſts, beſides the common integuments of the body, *viz.* the epidermis, cutis, and fat, are compoſed of a glandulous ſubſtance, of a whitiſh colour, not unlike that of the udders in quadrupeds. This forms the inner or central part, to the midſt of which the nipple anſwers; and is ſurrounded by a quantity of fat, which makes by much the greater part of the breaſt.

Among this glandulous ſubſtance are found, beſide the blood-veſſels, a multitude of lactiferous ducts, or ſmall tubes, which unite by frequent anaſtomoſes; theſe tubes are larger in women who give ſuck, and are dilated into ſinuſes in many places, forming a kind of cells, which hold the ſecreted milk, and communicate with the veins and arteries. All theſe parts are to be ſeen much more diſtinctly in breaſts that are large and full of milk, than in others; in young women, indeed, they are ſcarce to be diſtinguiſhed at all; as alſo in ſuch as have little breaſts, in ſuch as are emaciated, and in thoſe of very old people.

The arteries and veins of the breaſts are called mammary veſſels, and are ſent from the ſubclavian and axillary veſſels. The former of theſe are called the internal, and the other the external ones. The nerves are from the dorſal ones of the ſpinal marrow.

Swelling breaſts, eſpecially if there be milk found in them, is generally judged a mark of the loſs of virginity, and a proof

that a woman has been with child; tho', it is ſaid, it does not hold univerſally. See the article VIRGINITY.

The ſwelling of the breaſts during the time of geſtation, is owing to the conſent between the breaſts and the uterus; there being ſo near a communication between the mammary veſſels, and the hypogaſtric veſſels of the womb, that a dilatation in the latter is attended with a ſimilar one in the former. See the articles UTERUS, PREGNANCY, &c.

The breaſts, eſpecially after delivery, are liable to divers diſeaſes; as inflammations, excoriations, indurations, tumefactions, nodes, abſceſſes, ſchirrhuſes, and cancers; to which may be added, certain peculiar diſorders, as the ſparganoſis, ſtrangalides, and gynæcomaſton.

Uſes of the BREASTS are, 1. To ſecrete the milk in their glandulous ſubſtance, from the arterial blood, and to collect it in their ſinuſes and tubuli lactiferi, to be diſcharged, at a proper time, by the nipple, for the nouriſhment of the infant. 2. To add to the peculiar beauty of the female. 3. To add a ſtimulus to venery on both ſides, while they are handled and preſſed.

As to the uſe of the nipples, they are evidently for giving ſuck to the infant, who, without them, could ſcarce poſſibly get at it.

BREAST-PLATE, in antiquity, a piece of armour worn to defend the breaſt, originally believed to be made of hides, or hemp twiſted into ſmall cords, but afterwards made of braſs, iron, or other metals, which were ſometimes ſo exquiſitely hardened, as to be proof againſt the greateſt force.

BREAST PLATE, in the manege, the ſtrap of leather that runs from one ſide of the ſaddle to the other, over the horſe's breaſt, in order to keep the ſaddle tight, and hinder it from ſliding backwards.

BREAST PLOUGH, one ſo faſhioned that a man may ſhove it before him.

BREAST-WORK, the ſame with parapet. See the article PARAPET.

BREATH, the air inſpired and expelled again in the action of reſpiration. See the article RESPIRATION.

BREATH, or WIND, in the manege, ſometimes ſignifies the eaſy reſpiration of an horſe, and ſometimes it implies the eaſe and reſt or repoſe of a horſe; as give your horſe breath, that is, do not ride him down; give that leaping horſe a long breathing time between the turns, or repetitions of his manege, &c.

BREATHING, the ſame with reſpiration. See the article RESPIRATION.

Difficulty of BREATHING, in medicine. See the article ASTHMA.

BRECHIN, a borough-town of the county of Angus in Scotland, about fifteen miles north-eaſt of Dundee: weſt long. 2° 20′, north lat. 56° 40′.

BRECON, or BRECKNOCK, a borough-town of Brecknockſhire, in Wales; weſt longitude 3° 25′, north latitude 52°.

BREDA, the capital of dutch Brabant, about thirty miles north-eaſt of Antwerp; eaſt longitude 4° 40′, north lat. 51° 40′.

It is a ſtrong fortified town.

BREECHES, a kind of cloſe garment or covering for the thighs, hips, &c. worn by the modern Europeans.

The breeches are peculiar to the male ſex, and anſwer, in ſome meaſure, to the femoralia of the Romans.

BREECH *of a great gun*, or cannon, the end next the touch-hole.

BREECHINGS, in the ſea-language, the ropes with which the great guns are laſhed, or faſtened to the ſhip's ſide.

They are thus called, becauſe made to paſs round the breech of the gun.

BREEDING, in a moral ſenſe, denotes a perſon's deportment or behaviour in the external offices and decorums of ſocial life. In this ſenſe, we ſay, well-bred, ill-bred, a man of breeding, &c. Good breeding is hard to be defined; and none can underſtand the ſpeculation, but thoſe who have the practice. Good breeding amounts to much the ſame with what is otherwiſe called politeneſs, and, among the antient Romans, urbanity. Good breeding is near to virtue, and will of itſelf lead a man a great part of the way towards the ſame; it teaches him to rejoice in acts of civility, to ſeek out objects of compaſſion, and be pleaſed with every occaſion of doing good offices. Lord Shafteſbury compares the well-bred man with the real philoſopher: both characters aim at what is excellent, aſpire to a juſt taſte, and carry in view the model of what is beautiful and becoming. The conduct and manners of the one is formed according to the moſt perfect eaſe and good entertainment of company; of the other, according to the ſtricteſt intereſt of mankind; the one according to his rank and quality in his private ſtation; the other, according to his rank and dignity in nature. Horace ſeems to have united both characters,

Quid

Quid verum atque decens curo & rogo, & omnis in hoc ſum.

BREEDING *of horſes.* To raiſe a good and beautiful race of horſes, it is requiſite to chooſe for a ſtallion a fine barb, free from hereditary infirmities, ſuch as weak eyes, bad feet, ſpavins, purſineſs, *&c.* He ſhould, three months before the time he is to cover, be fed with ſound oats, peaſe, or beans, or with coarſe bread, and little hay, but a good deal of wheat ſtraw, leading him out twice a day to water; and after he has drank, walking him up and down an hour, without making him ſweat. He ſhould be admitted to mares according to his ſtrength; that is, let him have twelve or fifteen, or at moſt twenty. Mares go with foal eleven months, and as many days as they are years old: ſo a mare ſhould be covered, that her foal may be brought forth at a time when there will be plenty of good graſs.

About the end of May, you ſhall put your mares into an incloſure capable of feeding them the whole time the ſtallion is to be with them: all the mares are put together, as well the barren as others. Lead forth your ſtallion, after having taken off his hind ſhoes, then let him cover one twice in hand; after which turn him looſe to the reſt. In this incloſure there ſhould be built a little lodge, into which the ſtallion may retire from the heat; and in the lodge, a manger, wherein you are to give him oats, beans, *&c.* and he muſt always be thus entertained while he is with the mares, which will be about ſix or ſeven weeks. You muſt take care that the ſtallion and the mare have the ſame food. Mares which are very groſs, hold with much difficulty: but thoſe that are indifferently fat and plump, conceive with greater eaſe.

To bring a mare in ſeaſon, and make her retain, let her eat, eight days before ſhe is brought to the horſe, about two quarts of hemp-ſeed in the morning, and as much at night, as to the age of the ſtallion, he ſhould not cover before he is ſix, nor after he is fifteen. On the other hand, the mares ſhould not be covered before they are three years old.

BREEDING *of milk.* When a cow chances to have a calf, and is poor, or to calve before her time, and has not milk enough to keep her calf, ſhe muſt have a good deal of maſhes of malt given her lukewarm; alſo every morning and evening a quart of ale made into a poſſet, whoſe curd take off, and put into it aniſeed, cummin, lettice, and coriander-ſeeds, all made into powder; mingle them with the poſſet, and let them ſtand three hours together; then give it the cow for four days ſucceſſively; and by often drawing of her paps, her milk will be ſure to increaſe in a ſhort time.

BREEMING, in ſea-language, denotes the burning off the weeds, filth, *&c.* which a ſhip contracts under water, with furze, faggots, or reeds, before her bottom is caulked and graved; and is to be done when in the dock, on the careen, or on the ground aſhore.

BREEZE, a ſhifting wind, that blows from ſea or land for ſome certain hours in the day or night; common in Africa, and ſome parts of the Eaſt and Weſt Indies. The ſea breeze is only ſenſible near the coaſts; it commonly riſes in the morning, about nine, proceeding ſlowly in a fine ſmall black curl on the water, towards the ſhore; it increaſes gradually till twelve, and dies, about five. Upon its ceaſing, the land-breeze commences, which increaſes till twelve at night, and is ſucceeded in the morning by the ſea-breeze again.

BREEZE, in brick-making, ſmall aſhes and cinders, ſometimes made uſe of inſtead of coals, for the burning of bricks: but as this does not ſo well anſwer the end, the uſe of it is prohibited by 12 Geo. I. cap. xxxv.

BREEZE is alſo the name of an inſect, called the gad-fly, or horſe fly. See the article GAD-FLY.

BREGENTS, or BERGENTS, a town ſituated at the eaſt-end of the lake of Conſtance, in the county of Tyrol, in Germany; eaſt long. 9° 40′, and north latitude 47° 36′.

BREGMA, in anatomy, the ſame with ſinciput. See the article SINCIPUT.

The bregma conſiſts of two bones, which are bones of the cranium, called oſſa parietalia.

BREMEN, the capital of the dutchy of the ſame name, in lower Saxony, ſituated on the river Weſer, in 8° 20′ eaſt longitude, and 53° 25′ north latitude.

This city and dutchy belongs to the king of Great Britain, as elector of Hanover.

BREMERVHOIDE, a fortified town of the dutchy of Bremen, about ſeventeen miles north of Bremen; eaſt longitude 8° 35′, and north latitude 53° 48′.

BREMGARTEN, a town of Switzerland, in

in the county of Baden, about twelve miles weſt of Zurich; eaſt longitude 8° 15′, and north latitude 47° 20′.

BRENT, in geography, a market town of Devonſhire, ſituated twenty-ſeven miles ſouth-weſt of Exeter; weſt longitude 4° 7′, and north latitude 50° 30′.

BRENT-GOOSE, a ſpecies of gooſe with a black neck and a white collar round; uſually confounded with the barnacle, though in reality a diſtinct ſpecies.

It is a little larger than the common duck, and is deſcribed by authors under the name of *anas torquata*.

BRENTFORD, a market-town of Middleſex, about ſeven miles weſt of London: weſt longit. 7′, and north lat. 51° 26′.

BRENTWOOD, or BURNTWOOD, a market-town of Eſſex, about fifteen miles eaſt of London; eaſt longitude 15′, and north latitude 51° 35′.

BRESCIA, a city of Italy, about thirty miles north of Cremona; eaſt longitude 10° 35′, and north latitude 45° 30′.

It is a biſhop's ſee, and ſubject to Venice.

BRESELLO, a town of the dutchy of Modena, in Italy, ſituated on the ſouthern ſhore of the river Po, about twenty-five miles north-weſt of Modena; eaſt longitude 11°, and north latitude 44° 46′.

BRESICATE, in commerce, a kind of bays, of which there is ſome trade carried on with the negroes, between the river Gambia and Sierra Leone. The beſt ſorts for that purpoſe are the blue and the red.

BRESLAW, the capital of Sileſia, ſituated upon the river Oder, in 16° 50′ eaſt longitude, and 51° 15′ north latitude.

BRESSE, a territory of Burgundy, in France: it is bounded by Franche Compte on the north, by Savoy on the eaſt, by Dauphine on the ſouth, and by the Lyonois on the weſt.

BRESSVIRE, a town of Poictou, in the Orleanois in France, ſituated about thirty-five miles north-weſt of Poictiers; weſt longitude 30′, and north latitude 46° 50′.

BREST, in geography, an excellent port-town of Britanny, in France; weſt longitude 4° 30′, and north latitude 48° 25′.

BREST, or BREAST, in architecture, a term ſometimes uſed for the member of a column, more uſually called *tore*. See the article TORE.

BREST-SUMMERS, in timber-buildings, are pieces in the outward parts thereof, into which the girders are framed: this, in the ground-floor, is called a cell; and, in the garret floor a beam.

As to their ſize, it is the ſame with that of girders. See the article GIRDERS.

BRESTE, or BRESSICI, the capital of the palatinate of Breſſici, and of Poleſia, in Poland, ſituated on the river Bog, about eighty miles eaſt of Warſaw; eaſt longitude 24°, and north latitude 52°.

BRETESSE, in heraldry, denotes a line embattled on both ſides. See the article EMBATTLED.

BRETON, or CAPE-BRETON, an american iſland, ſeparated from New-Scotland by a narrow ſtreight, called Canſo: it is about one hundred miles in length, and fifty in breadth, and is ſituated between 61° and 62° weſt longitude, and between 45° and 48° north latitude.

BRETVEIL, a town of Normandy, in France, about thirty-five miles ſouth of Rouen; eaſt longitude 1°, and north latitude 48° 50′.

BREVE, in law, is any writ directed to the chancellor, judges, ſheriffs, or other officers, whereby a perſon is ſummoned, or attached, to anſwer in the king's courts, *&c.*

BREVE PERQUIRERE, the purchaſing of a writ or licenſe for trial in the king's courts; whence comes the preſent uſage of paying 6s. 8d. fine to the king in ſuit, for money due on bond, where the debt is 40l. and of 10s. where it is 100l. *&c.*

BREVE DE RECTO is a writ of right, or licenſe, for a perſon ejected to ſue for the poſſeſſion of the eſtate detained from him.

BREVE, in muſic, a note or character of time, in the form of a diamond, or ſquare, without any tail, and equivalent to two meaſures, or minims.

BREVE, or BREVIS, in grammar: ſyllables are diſtinguiſhed into longs and breves, according as they are pronounced quicker, or more ſlow. See the article QUANTITY.

BREVET, in the french cuſtoms, denotes the grant of ſome favour, or donation from the king, in which ſenſe it partly anſwers to our warrant, and partly to letters patent.

BREVIARY, a daily office, or book of divine ſervice, in the romiſh church. It is compoſed of matins, lauds, firſt, third, ſixth, and ninth, veſpers, and the compline, or poſt communio.

The breviary of Rome is general, and may

may be uſed in all places: but on the model of this, various others have been built, appropriated to each dioceſe, and and each order of religious.

The breviary of the Greeks is the ſame in almoſt all churches and monaſteries that follow the greek rites: the Greeks divide the pſalter into twenty parts. In general the greek breviary conſiſts of two parts, the one containing the office for the evening the other that of the morning, divided into matins, lauds, firſt, third, ſixth, and ninth, veſpers, and the compline: that is, of ſeven different hours, on account of that ſaying of David, *ſepties in die laudem dixi tibi.*

The inſtitution of the breviary is not very antient: there have been inſerted in it the lives of the ſaints, full of ridiculous and ill atteſted ſtories, which gave occaſion to ſeveral reformations of it, by ſeveral councils, particularly thoſe of Trent and Cologn; by ſeveral popes, particularly Pius V. Clement VIII. and Urban VIII. alſo by ſeveral cardinals and biſhops, each lopping off ſome extravagances, and bringing it nearer to the ſimplicity of the primitive offices.

Originally every body was obliged to recite the breviary every day; but by degrees the obligation was reduced to the clergy only, who are enjoined under penalty of mortal ſin and eccleſiaſtical cenſures, to recite it at home, when they cannot attend in public. In the XIVth century there was a particular reſerve granted in favour of biſhops, who were allowed, on extraordinary occaſions, to paſs three days without rehearſing the breviary.

This office was originally called curſus, and afterwards the breviarium; which latter name imports, that the old office was abridged, or rather, that this collection is a kind of abridgment of all the prayers.

The breviaries now in uſe are innumerable: the difference between them conſiſts principally in the number and order of the pſalms, hymns, pater noſter's, ave Mary's, creeds, magnificat's, cantemus's, benedictus's, canticamus's, nunc dimittis's, miſerere's, halleluja's, gloria patri's, *&c.*

BREVIARY, *breviarium*, in roman antiquity, a book firſt introduced by Auguſtus, containing an account of the application of the public money.

BREVIATOR, an officer under the eaſtern empire, whoſe buſineſs it was to write and tranſlate briefs.

At Rome thoſe are ſtill called breviators, or abbreviators, who dictate and draw up the pope's briefs. See the article ABBREVIATOR.

BREVIBUS A ROTULIS LIBERANDIS, a writ or command to a ſheriff, to deliver to his ſucceſſor, the county, with the appurtenances, and the rolls, writs, and other things to his office belonging.

BREVIER, among printers, a ſmall kind of type, or letter, between nonpareil and bourgeois.

BREVIS, in anatomy, an appellation given to ſeveral muſcles, on account of their ſhortneſs. Thus,

BREVIS CUBITI, in anatomy, is a muſcle that riſes from the ſuperior and poſterior part of the humerus, and by joining its fleſhy fibres with the brachiæus externus and longus, and becoming tendinous, covers the elbow, and is inſerted into the olecranium, to extend the arm.

BREVIS RADII, a muſcle which comes from the external and upper part of the ulna, and paſſing round the radius, is inſerted into its upper and fore part, below the tendon of the biceps: this and the longus radii are called the ſupinators, their office being to turn the palm upwards.

BREVIS PALMARIS lies under the aponeuroſis of the palmaris, and ariſes from the bone of the metacarpus, that ſuſtains the little finger, and from that bone of the carpus which lies above the reſt: it goes tranſverſly, and is inſerted into the eighth bone of the carpus: it aſſiſts in making the palm of the hand concave.

BREVITY, in matters of ſtile, is a perfection of diſcourſe, whereby all ſuperfluous words are rejected, and only ſuch as are abſolutely neceſſary uſed. However, as brevity is apt to degenerate into obſcurity, it is a leſs fault to ſay too much than too little.

BREVIUM CUSTOS. See CUSTOS.

BREVIUM FALSO RETORNO. See FALSO.

BREVORDT, a town of Guelderland, in the united Netherlands, ſituated about twenty-five miles ſouth-eaſt of Zutphen, in 6° 3′ eaſt long. and 52° north lat.

BREWER, a perſon who profeſſes the art of brewing.

There are companies of brewers in moſt capital cities: that of London was incorporated in 1427, by Hen. VI. and that of Paris is ſtill older.

BREWER'S-HAVEN, a good harbour at the north-end of the iſland at Chiloe, on the coaſt of Chili, in South America; weſt longitude 82°, and ſouth latitude 42°.

BREW-

BREW-HOUSE, a place for brewing. See the next article.

It ſhould be ſo ſituated that the ſmoke may not be an annoyance to any of the apartments of the dwelling-houſe; the furnace ſhould be made cloſe and hollow, for ſaving the fire, and giving vent for the paſſage of the ſmoke, that the liquor may not be tainted thereby. A copper is better than a leaden boiler. The maſh-fat ſhould be placed near to the head of the cooler, and the cooler near to the maſh-fat, and the guile-fat under the cooler; and adjoining to them all, ſeveral clean tubs, to receive the worts and liquors.

BREWING, the operation of preparing ale, or bear, from malt. The uſual proceſs of brewing is as follows: the ingredients being ready, the water muſt be made to boil very ſpeedily, and while boiling with the greateſt violence, the fire muſt be immediately damped, or put out; when the height of the ſteam is over, the water is put into the maſhing tub, to wet the malt; then ſo much being poured out, as to make it of a conſiſtence ſtiff enough to be rowed up, let it ſtand thus a quarter of an hour, after which another quantity of the water is added, and rowed up as before; at laſt the full quantity of water is poured upon it, and that in proportion as the liquor is intended to be ſtrong or weak: this part of the operation is called maſhing. Afterwards the whole may be left to ſtand two or three hours, more or leſs, according to the ſtrength of the wort, or the difference of the weather; then let it run into the receiver, and maſh again for a ſecond wort, in the ſame manner as for the firſt, only the water muſt be cooler, and muſt not ſtand above half the time.

The two worts being mixed together, the quantity of hops that is deſigned may be added thereto, and the liquor put into the copper, which being cloſely covered up, let it boil gently for the ſpace of an hour or two; then let the liquor into the receiver, and the hops ſtrained from it into the coolers.

When cool, the barm is applied; which done, it is left to work, or ferment, till it be fit to tun up.

For ſmall beer there muſt be a third maſhing; the water muſt be near cold, and to ſtand not above three quarters of an hour; to be hopped and boiled at diſcretion.

For double ale, or beer, the two liquors coming from the two firſt maſhings muſt be uſed as liquor for a third maſhing of freſh malt. For fine ale, the liquor thus brewed is farther prepared with moloſſes: inſtead of yeſt, or barm, ſome uſe caſtile ſoap, others flour and eggs, others an eſſential oil of barley, others a quinteſſence of malt, others of wine, and others the ſal panariſtus.

In ordering veſſels for the preſervation of beer, they muſt not at one time be ſcalded, and at another waſhed with cold water: ſome rub the veſſels with hop-leaves, that come out of the wort, and ſo rince them again; then being dried in the air, and headed, they take a long piece of canvas, and dipping it in brimſtone, make matches thereof, and with a few coriander-ſeeds, ſet fire thereto: others opening the bung, let the match burn in the veſſel, keeping in as much as they can of the ſulphurous fume, by laying the bung lightly on, and when the match is burnt, they ſtop all cloſe for a little time; then being opened, and coming to the air, the caſk is found to be as ſweet as a violet.

BREY, a town of the biſhopric of Liege, in Germany, about ſixteen miles north of Maeſtricht; eaſt longitude 5° 40′, and north latitude 51° 15′.

BREYNIA, in botany, a genus of the polyandria-monogynia claſs of plants, whoſe corolla conſiſts of four oval patent petals, and is ſomewhat larger than the cup: the fruit is a very long, fleſhy, clavated ſoft pod, formed of two valves, and containing only one cell: the ſeeds are numerous, kidney-ſhaped, fleſhy, and arranged longitudinally, in the pod.

BRIANCON, a town of Dauphiny, in France, ſituated about forty-five miles ſouth-eaſt of Grenoble; eaſt longitude 6° 20′, and north latitude 44° 50′.

BRIAR, or BRIAR-BUSH, the wild roſe, with large hairy fruit. See ROSE.

BRIARE, a town of the iſle of France, ſituated on the river Loire, about ſeventy-five miles ſouth of Paris; eaſt long. 2° 45′, and north latitude 47° 40′.

BRIBE, a gift given a perſon for doing or forbearing any action, that he ought to do or forbear. See the next article.

BRIBERY, in common law, is when a perſon in judicial places, takes a gift or reward of any perſon who has buſineſs before him, for his doing his office, or by colour of his office, except the king only, unleſs it be meat and drink.

Bribery, in judicial or miniſterial officers,

is punished by fine and imprisonment, and the loss of office; and in a judge it is deemed so heinous, that antiently it was punished as treason. Judges servants are punishable for receiving bribes: and if any judge refuses a bribe offered him, the person that offered it may be punished. Officers of the customs taking any bribe, whereby the crown may be defrauded, forfeit 100l. Candidates that bribe electors, after the test of writs of election, &c. are disabled to serve in parliament; as are likewise such electors, to vote, and to hold any office, and shall forfeit 500l. &c.

BRICIANI, those of the order of that name. This was a military order, instituted by St. Bridget, queen of Sweden, who gave them the rules and constitutions of those of Malta and St. Augustin. This order was approved by pope Urban V. They were to fight for the burying of the dead, to relieve and assist widows, orphans, the lame, sick, &c.

BRICK, a fat reddish earth, formed into long squares, four inches broad, and eight or nine long, by means of a wooden mould, and then baked or burnt in a kiln, to serve the purposes of building.

Bricks are of great antiquity, as appears by the sacred writings, the tower and walls of Babylon being built with them. In the east they baked their bricks in the sun; the Romans used them unburnt, only leaving them to dry for four or five years in the air.

The Greeks chiefly used three kinds of bricks; the first whereof was called δίδωρον, *i. e.* of two palms, the second, τετράδωρον, of four palms; the third, πενταδωρον, of five palms. They had also other bricks, just half each of those, to render their works more solid, and also more agreeable to the sight, by the diversities of the figures and sizes of the bricks.

Of the matter whereof BRICKS *are made.* Pliny says, that to make good bricks they must not consist of any earth that is full of sand or gravel, nor of such as is gritty or stony; but of a greyish marl, or whitish chalky clay, or at least of a reddish earth: he also adds, that the best season for making bricks is the spring, because, if made in summer, they will be subject to crack, and be full of chinks. He directs, that the loam of which bricks are made, be well steeped and wrought with water:

Bricks, among us, are various, according to their various forms, dimensions, uses, method of making, &c. the principal of which are, compass bricks, of a circular form used in steyning of walls: concave, or hollow bricks, on one side flat like a common brick, on the other hollowed, and used for conveyance of water: feather-edged bricks, which are like common statute bricks, only thinner on one edge than the other, and used for penning up the brick pannels in timber buildings: cogging bricks are used for making the indented works under the caping of walls built with great bricks: caping bricks, formed on purpose for caping of walls: dutch or flemish bricks, used to pave yards, or stables, and for soap-boilers vaults and cisterns: clinkers, such bricks as are glazed by the heat of the fire in making: sandal or samel-bricks, are such as lie outmost in a kiln, or clamp, and consequently are soft and useless, as not being thoroughly burnt: great bricks are those twelve inches long, six broad, and three thick; used to build fence walls: plaister or buttress bricks, have a notch at one end, half the breadth of the brick; their use is to bind the work which is built of great bricks: statute bricks, or small common bricks, ought, when burnt, to be nine inches long, four and a quarter broad, and two and a half thick; they are commonly used in paving cellars, sinks, hearths, &c.

Making of BRICK. With regard to the manner of making bricks, we have place-bricks, generally made on the eastern part of Sussex; so called because of a level smooth place just by where they are struck or moulded. In this place, the bearer-off lays the bricks singly down in ricks or rows, as soon as moulded, where they are left till they are stiff enough to be turned on their edges; and drest, *i. e.* till their inequalities are cut off; when they are dry, they carry them to stacks, or places where they row them up, like a wall of two bricks thick, with some small intervals betwixt them, to admit the wind and air to dry them. When the stack is filled, they are covered with straw on the top, till they be dry enough to be carried to the kiln to be burnt.

Stock-bricks are of the same form with place-bricks, though different in the quality of their earth, and manner of mak-

ing. They are made on a ſtock, that is, the mould is put on a ſtock, after the manner of moulding or ſtriking of tiles; and when one brick is moulded, they lay it on a piece of board, a little longer than the brick, and on that brick they lay another like piece of board, and on this, another brick, till after this manner they have laid three bricks on one another; and ſo they continue to ſtrike and place them on the ſtage, as they do tiles, till the ſtage is full, then they take each three ſucceſſively, and carry them to the ſtacks, and turn them down on the edges, ſo that there will be the thickneſs of a thin piece of board betwixt each brick. When the ſtack is filled with one height of bricks, from one end to the other, they begin to ſet them upon thoſe firſt laid on the ſtack; by that time they will be a little dried, and will bear the others; for they are moulded of a very ſtiff earth. When they come to ſet a ſecond, third, &c. height or courſe, they cater them a little, as they call it, to prevent their reeling. When the ſtack is as high as they think fit, they cover them with ſtraw, as they do place-bricks, till they be dry enough to burn. This way is more troubleſome than that of making place-bricks; but they are forced to have recourſe to it in many places, where, if they laid their bricks abroad in a place to dry, as they do place-bricks, the nature of the earth is ſuch, that they would burſt to pieces.

The ſeveral ſteps in the proceſs of our brick-making, are, caſting the clay or earth: treading or tempering the ſame with water; ſanding the brick, which is to riddle or caſt dry ſand on the wet brick lying on the ground; raiſing the bricks on one ſide, that they may dry the better and ſooner; walling the brick, is to lay one upon another, after the manner of a wall to keep them from foul weather, and that they may dry thoroughly; ſodding the bricks, is to cover them up with turf; ſetting the bricks in the kiln, is the laying of ſlack or ſmall-coal between every courſe or row of bricks; dawbing the kiln, is the claying of it all about the top, to keep the fire in, and ſecure the kiln from weather; firing, is to ſet the fuel put into the arches on fire; earthing implies to put earth about it, to ſtop the arches, that the fire may take upwards to the top of the kiln; cooling the kiln after it has done burning; breaking the kiln; counting of the bricks; carrying the bricks, which is to bring them to the place where they are to be uſed, either on horſeback or in tumbrels.

The arches of a kiln of bricks, are the hollow places at the bottom where the fire is; pigeon-holes are apertures in the fire-arches; checker courſe, denotes the lower row of bricks in the arch; tying courſe, thoſe which cover the top of the arch; binding courſe, is the laying of bricks over the joints of the under courſe; dividing courſe, is the diviſions or parts of of a kiln; flatting courſe, is the top of all the kiln; the wheeler is he who carries the clay from the pit to the moulding board foot, and there turns it off the wheelbarrow; ſtaker, he who puts the clay off the ground upon the board; moulder, he who works the clay into the brick-moulds, and ſtrikes the ſuperfluous clay off the top of the moulds; breaker off, he who takes the mould, with the clay in it, from the moulder, and lays it on the ground to dry; moulder, he who parts off the clay from the mould; off-bearer, he who pulls off the empty mould into the tub of water or ſand; taker up of the brick has his work alſo to dreſs and ſmooth them from irregular edges.

After caſting the clay, the next ſtep is to tread or temper it, which ought to be performed doubly of what is uſually done; ſince the goodneſs of the bricks depends chiefly upon this firſt preparation. The earth itſelf, before it is wrought, is generally brittle and duſty; but, adding ſmall quantities of water gradually to it, and working and incorporating it together, it opens its body, and tinges the whole with a tough, glewy, ſtrong band or ſubſtance. If, in the tempering, you over-water them, as the uſual method is, they become dry and brittle almoſt as the earth they are made of; whereas, if duly tempered, they become ſmooth and ſolid, hard and durable. A brick of this laſt ſort takes up near as much earth as a brick and a half made the contrary way; in which the bricks are ſpongy, light, and full of cracks, partly through want of due working, and partly by mixing of aſhes and light ſandy earth, to make it work eaſy, and with greater diſpatch; as alſo to ſave culm or coals in the burning. We may add, that for bricks made of good earth, and well tempered, as they become ſolid and ponderous, ſo they take up a longer time in drying and burning than the common ones; and that the well drying of bricks,

bricks, before they be burned, prevents their cracking and crumbling in the burning.

The method of burning BRICKS. Bricks are burnt either in a kiln or clamp. Thoſe that are burnt in a kiln, are firſt ſet or placed in it, and then the kiln being covered with pieces of bricks, they put in ſome wood, to dry them with a gentle fire; and this they continue till the bricks are pretty dry, which is known by the ſmoke's turning from a darkiſh colour to a tranſparent ſmoke: they then leave off putting in wood, and proceed to make ready for burning, which is performed by putting in bruſh, furze, ſpray, heath, brake, or fern faggots; but before they put in any faggots, they dam up the mouth or mouths of the kiln with pieces of bricks (which they call ſhinlog) piled up one upon another, and cloſe it up with wet brick-earth, inſtead of mortar.

The ſhinlog they make ſo high, that there is but juſt room above it to thruſt in a faggot; then they proceed to put in more faggots, till the kiln and its arches look white, and the fire appears at the top of the kiln; upon which they ſlacken the fire for an hour, and let all cool by degrees. This they continue to do, alternately heating and ſlacking, till the ware be thoroughly burnt, which is uſually effected in forty-eight hours.

About London they chiefly burn in clamps, built of the bricks themſelves, after the manner of arches in kilns, with a vacancy between each brick, for the fire to play through; but with this difference, that inſtead of arching, they ſpan it over by making the bricks project one over another, on both ſides of the place, for the wood and coals to lie in till they meet, and are bounded by the bricks at the top, which cloſe all up. The place for the fuel is carried up ſtrait on both ſides, till about three feet high; then they almoſt fill it with wood, and over that lay a covering of ſea-coal, and then overſpan the arch; but they ſtrew ſea-coal alſo over the clamp, betwixt all the rows of bricks; laſtly, they kindle the wood, which gives fire to the coal, and when all is burnt, then they conclude the bricks are ſufficiently burnt.

Oil of BRICKS, olive oil imbibed by the ſubſtance of bricks, and afterwards diſtilled from it.

The proceſs is as follows: the pieces of bricks being heated red-hot in a ſmart fire, are extinguiſhed in a trough half filled with olive oil: being then ſeparated, and the brick thus ſaturated with oil, and groſly pounded, it is put into a retort, and placed in a reverberatory furnace, from whence is drawn an oil called by apothecaries oleum de lateribus, and by ſome chemiſts, oil of the philoſophers. It is uſed for reſolving tumours in the ſpleen, alſo againſt palſies, epilepſies, *&c.*

BRICKLAYER, one who lays bricks in the building of edifices of any kind. Tilers and bricklayers were incorporated 10 Eliz. under the name of maſter and wardens of the ſociety of freemen of the myſtery and art of tilers and bricklayers.

The materials uſed by bricklayers, are bricks, tiles, mortar, laths, nails, and tile-pins.

Their tools are, a brick-truel, wherewith to take up mortar; a brick-ax, to cut bricks to the determined ſhape; a ſaw, for ſawing bricks; a rub-ſtone, on which to rub them; alſo a ſquare, wherewith to lay the bed or bottom, and face or ſurface of the brick, to ſee whether they be at right angles: a bevel, by which to cut the under ſizes of bricks to the angles required: a ſmall trannel of iron, wherewith to mark the bricks: a float-ſtone, with which to rub a moulding of brick to the pattern deſcribed: a banker, to cut the bricks on: line-pins, to lay their rows or courſes by: plumb-rule, whereby to carry their work up right: level, to conduct it horizontal: ſquare, to ſet off right angles: ten foot rod, wherewith to take dimenſions: jointer, wherewith to run the long joints: rammer, wherewith to beat the foundation; crow and pick-ax, wherewith to dig through walls.

BRICK-LAYING, the art of framing edifices of bricks.

Brick-laying is one of the arts ſubſervient to architecture.

Moxon has an an exerciſe expreſs on the art of brick-laying, wherein he deſcribes the materials, tools, and methods of working uſed by bricklayers.

Great care is to be taken, that bricks be laid joint on joint in the middle of walls, as ſeldom as may be: and that there be good bond made there, as well as on the outſides. Some brick-layers, in working a brick and half wall, lay the header on one ſide of the wall, perpendicular on the header on the other ſide, and ſo all

along through the whole courſe: whereas, if the header on one ſide of the wall were toothed as much as the ſtretcher on the other ſide, it would be a ſtronger toothing, and the joints of the headers of one ſide would be in the middle of the headers of the courſe they lie upon of the other ſide.

If bricks be laid in winter, let them be kept as dry as poſſible: if in ſummer, it will quit coſt to employ boys to wet them, for that they will then unite with the mortar better than if dry, and will make the work ſtronger. In large buildings, or where it is thought too much trouble to dip all the bricks ſeparately, water may be thrown on each courſe after they are laid, as was done at the building of the phyſicians college in Warwick lane, by order of Dr. Hooke.

If bricks be laid in ſummer, they are to be covered: for if the mortar dries too haſtily, it will not bind ſo firmly to the bricks, as when left to dry more gradually. If the bricks be laid in winter, they are alſo to be covered well, to protect them from rain, ſnow, and froſt: which laſt is a mortal enemy to mortar, eſpecially to all ſuch as has been wetted juſt before the froſt aſſaults it.

BRICKMAKER, he who undertakes the making of bricks. See the article BRICK.

BRICKING, among builders, the counterfeiting of a brick wall on plaſter, which is done by ſmearing it over with red ochre, and marking the joints with an edged tool; theſe laſt are afterwards filled with a fine plaſter.

BRIDE, *ſponſa*, a woman newly married. See the article MARRIAGE.

Among the Grecks it was cuſtomary for the bride to be conducted from her father's houſe to her huſband's in a chariot, the evening being choſe for that purpoſe, to conceal her bluſhes: ſhe was placed in the middle, her huſband ſitting on one ſide, and one of her moſt intimate friends on the other; torches were carried before her, and ſhe was entertained in the paſſage with a ſong ſuitable to the occaſion. When they arrived at their journey's end, the axle-tree of the chariot they rode in, was burnt, to ſignify that the bride was never to return to her father's houſe. Among the Romans, when a bride was carried home to her huſband's houſe, ſhe was not to touch the threſhold at her firſt entrance, but was to leap over it.

BRIDEGROOM, *ſponſus*, a man newly married, the ſpouſe of the bride.

The ſpartan bridegrooms committed a kind of rape upon their brides: for matters being agreed on between them two, the woman that contrived and managed the match, having ſhaved the bride's hair cloſe to her ſkin, dreſſed her up in man's cloaths, and left her upon a mattreſs; this done, in came the bridegroom, in his uſual dreſs, having ſupped as ordinary, and ſtealing as privately as he could to the room where the bride lay, and untying her virgin-girdle, took her to his embraces, and having ſtayed a ſhort time with her returned to his companions, with whom he continued to ſpend his life, remaining with them by night as well as by day, unleſs he ſtole a ſhort viſit to his bride, which could not be done without a great deal of circumſpection, and fear of being diſcovered.

BRIDEWELL, a work-houſe, or place of correction for vagrants, ſtrumpets, and other diſorderly perſons.

Theſe are made to work, being maintained with cloathing and diet; and when it ſeems good to their governors, they are ſent by paſſes into their native countries: however, while they remain here, they are not only made to work, but, according to their crimes, receive, once a fortnight, ſuch a number of ſtripes as the governor commands. Yet to this hoſpital ſeveral hopeful and ingenious lads are put apprentices, and prove afterwards honeſt and ſubſtantial citizens.

BRIDGE, a work of maſonry or timber, conſiſting of one or more arches, built over a river, canal, or the like, for the conveniency of croſſing the ſame.

Bridges are a ſort of edifices very difficult to execute, on account of the inconvenience of laying foundations, and walling under water.

The parts of a bridge are the piers, the arches, the pavement, or way over for cattle and carriages, the foot way on each ſide, for foot paſſengers, the rail or parapet, which incloſes the whole, and the butments or ends of the bridge on the bank.

The conditions required in a bridge are, that it be well deſigned, commodious, durable, and ſuitably decorated. The piers of ſtone bridges ſhould be equal in number, that there may be one arch in the middle, where commonly the current is ſtrongeſt; their thickneſs is not to be leſs

than

than a ſixth part of the ſpan of the arch, nor more than a fourth; they are commonly guarded in the front with angular ſterlings, to break the force of the current: the ſtrongeſt arches are thoſe whoſe ſweep is a whole ſemicircle; as the piers of bridges always diminiſh the bed of a river, in caſe of inundations, the bed muſt be ſunk or hollowed in proportion to the ſpace taken up by the piers, (as the waters gain in depth what they loſe in breadth) otherwiſe the current may waſh away the foundation, and endanger the piers: to prevent this, they ſometimes diminiſh the current, either by lengthening its courſe, or by making it more winding; or by ſtopping the bottom with rows of planks, ſtakes, or piles, which break the current. It is alſo required, that the foundation of bridges be laid at that ſeaſon of the year, when the waters are loweſt; and if the ground be rocky, hard gravel, or ſtony, the firſt ſtones of the foundation may be laid on the ſurface; but if the ſoil be ſoft ſand, it will be neceſſary to dig till you come to a firm bottom.

Among the bridges of antiquity, that built by Trajan over the Danube is allowed to be the moſt magnificent; it was compoſed of twenty arches, of an hundred and fifty feet in height, and their opening from one pier to another was an hundred and ſixty feet: the piers of this fine bridge are ſtill to be ſeen in the Danube, being erected between Servia and Moldavia, a little above Nicopolis.

Among modern bridges, that of Weſtminſter, built over the river Thames, may be accounted one of the fineſt in the world: it is forty-four feet wide, a commodious foot-way being allowed for paſſengers, on each ſide, of about ſeven feet broad, raiſed above the road allowed for carriages, and paved with broad moor-ſtones, while the ſpace left between them is ſufficient to admit three carriages and two horſes to go a-breaſt, without any danger. Its extent from wharf to wharf is 1220 or 1223 feet, being full three hundred feet longer than London bridge. The free water-way under the arches of this bridge is eight hundred and ſeventy feet, being four times as much as the free water-way left between the ſterlings of London bridge, before it was lately repaired; this diſpoſition, together with the gentleneſs of the ſtream, are the chief reaſons why no ſenſible fall of water can ever ſtop, or, in the leaſt, endanger the ſmalleſt boats, in their paſſage through the arches.

It conſiſts of thirteen large and two ſmall arches, together with fourteen intermediate piers.

Each pier terminates with a ſaliant right angle againſt either ſtream: the two middle piers are each ſeventeen feet wide at the ſpringing of the arches, and contain three thouſand cubic feet, or near two hundred tons of ſolid ſtone; and the others decreaſe in width equally on each ſide by one foot.

All the arches of this bridge are ſemicircular; they all ſpring from about two feet above low-water mark; the middle arch is ſeventy-ſix feet wide, and the others decreaſe in breadth equally on each ſide by four feet.

This bridge is built of the beſt materials, and the ſize and diſpoſition of theſe materials are ſuch, that there is no falſe bearing, or ſo much as a falſe joint in the whole ſtructure; beſides that, it is built in a neat and elegant taſte, and with ſuch ſimplicity and grandeur, that, whether viewed from the water, or by the paſſengers who walk over it, it fills the mind with an agreeable ſurprize. The ſemioctangular towers, which form the receſſes of the foot-way, the manner of placing the lamps, and the height of the baluſtrade, are, at once the moſt beautiful, and, in every other reſpect, the beſt contrived.

Bridges are either built of ſtone or timber, as is judged moſt convenient.

Stone BRIDGES conſiſt of piers, arches, and butments, made of hewn ſtone, ſometimes alſo intermixed with bricks.

Wooden BRIDGES are compoſed of beams and joiſts, ſupported by punchions, well cramped and bound together.

Ruſhen BRIDGES are made of great bundles of ruſhes, bound faſt together, over which planks are laid, and faſtened: theſe are put over marſhy places, to ſerve for a croſſing ground.

Pendent or hanging BRIDGES, called alſo philoſophical bridges, are thoſe not ſupported by poſts or pillars, but hung at large in the air, ſuſtained only at the two ends or butments.

Draw-BRIDGE, one that is faſtened with hinges at one end only, ſo that the other may be drawn up; in which caſe, the bridge ſtands upright, to hinder the paſſage of a ditch or moat.

Flying or floating BRIDGE is generally made of

of two ſmall bridges, laid one over the other in ſuch a manner, that the uppermoſt ſtretches and runs out, by help of certain cords, running through pullies placed along the ſides of the under bridge, which puſh it forwards, till the end of it joins the place it is intended to be fixed on.

BRIDGE *of boats*, boats made of copper, and joined ſide by ſide, till they reach acroſs a river, which being covered with planks, are faſtened with ſtakes or anchors.

BRIDGE *of communication* is that made over a river, by which two armies, or forts, which are ſeparated by that river, have a free communication with one another.

Floating BRIDGE, a bridge made uſe of, in form of a work in fortification, called a redoubt, conſiſting of two boats, covered with planks, which are ſolidly framed, ſo as to bear either horſe or cannon.

BRIDGE, in gunnery, the two pieces of timber which go between the two tranſums of a gun-carriage, on which the bed reſts.

BRIDGE, in muſic, a term for that part of a ſtringed inſtrument over which the ſtrings are ſtretched. The bridge of a violin is about one inch and a quarter high, and near an inch and a half long.

BRIDGE-TOWN, the capital of the iſland of Barbadoes; weſt longitude 56°, and north latitude 13°.

It has commodious wharfs, for unlading goods, alſo ſome forts and caſtles for the defence of the place.

BRIDGE-NORTH, a borough-town of Shropſhire, ſituated on the river Severn, about ſixteen miles ſouth-eaſt of Shrewſbury; weſt longitude 2° 30′, and north latitude 52° 40′.

It ſends two members to parliament.

BRIDGE-WATER, a large borough-town of Somerſetſhire, ſituated near the mouth of the river Evil, in 3° weſt longitude, and 51° 15′ north latitude.

It likewiſe ſends two members to parliament.

BRIDLE, in the manege, a contrivance made of ſtraps or thongs of leather, and pieces of iron, in order to keep a horſe in ſubjection and obedience.

The ſeveral parts of a bridle are the bit, or ſnaffle; the head-ſtall, or leathers from the top of the head to the rings of the bit; the fillet, over the fore-head and under the fore-top; the throat-band, which buttons from the head-band under the throat; the reins, or long thongs of leather that come from the rings of the bit, and being caſt over the horſe's head, the rider holds them in his hand; the noſe-band, going through loops at the back of the head-ſtall, and buckled under the cheeks; the trench; the caveſan; the martingal, and the chaff-halter.

Bridles imported pay a duty of 4 s. $9\frac{45}{100}$ d. the dozen; whereof 4 s. $3\frac{75}{100}$ d. is repaid on exporting them again: beſides which they alſo pay 6 s. for every 20 s. value upon oath, without any draw-back.

BRIDLE-HAND is the horſe-man's left-hand, the right-hand being the ſpear or ſword-hand.

To ſwallow the BRIDLE, is ſaid of a horſe that has too wide a mouth, and too ſmall a bit-mouth.

BRIDLE, *frænum*, in anatomy. See the article FRÆNUM.

BRIDON, or SNAFFLE, after the engliſh faſhion, is a very ſlender bit-mouth, without any branches. The Engliſh make much uſe of them, and ſcarcely uſe any true bridles except in the ſervice of war. The French call them bridons, by way of diſtinction from bridles.

BRIDPORT, a borough and port-town of Dorſetſhire, ſituated about ten miles weſt of Dorcheſter; weſt longitude 3°, and north latitude 50° 40′.

It ſends two members to parliament.

BRIEF, in common-law, a writ whereby a man is ſummoned or attached to anſwer any action.

It is called brief, becauſe it is couched in a few words, without any preamble.

Brief is alſo uſed for a writing iſſued out of any of the king's courts of record at Weſtminſter, whereby ſomething is commanded to be done, in order to juſtice, or the execution of the king's command.

BRIEF is alſo taken for a letter patent, granting a licenſe to a ſubject to make collection for any public or private loſs, as briefs for loſs by fire, to be read by miniſters in churches, *&c.*

BRIEF is likewiſe an abridgment of a client's caſe, wrote out for the inſtruction of council, on a trial at law.

Apoſtolical BRIEFS, letters which the pope diſpatches to princes, or other magiſtrates, relating to any public affair.

Theſe briefs are diſtinguiſhed from bulls, in regard the latter are more ample, and always written on parchment, and ſealed with lead or green wax; whereas briefs are very conciſe, written on paper, ſealed with red wax, and with the ſeal of the fiſherman, or St. Peter in a boat.

BRIEG, a town of Sileſia, about twenty miles

miles ſouth-eaſt of Breſlaw: eaſt longitude 17° 20′, and north latitude 50° 50′.

BRIEUX, a port-town of Britanny, in France, ſituated on the engliſh channel, about thirty miles weſt of St. Malo; weſt longitude 2° 50′, and north latitude 48° 40′.

BRIGADE, in the military art, a party or diviſion of a body of ſoldiers, whether horſe or foot, under the command of a brigadier.

An army is divided into brigades of horſe and brigades of foot: a brigade of horſe is a body of eight or ten ſquadrons; a brigade of foot conſiſts of four, five, or ſix battalions.

The eldeſt brigade has the right of the firſt line, and the ſecond the right of the ſecond, and the two next take the left of the two lines, and the youngeſt ſtand in the center.

BRIGADE-MAJOR is an officer appointed by the brigadier, to aſſiſt him in the management and ordering of his brigade.

BRIGADIER is the general officer who has the command of a brigade. The eldeſt colonels are generally advanced to this poſt. He that is upon duty is brigadier of the day. They march at the head of their own brigades, and are allowed a ſerjeant and ten men, of their own brigade for their guard.

BRIGANDINE, a coat of mail, a kind of antient defenſive armour, conſiſting of thin jointed ſcales of plate, pliant and eaſy to the body.

BRIGANTINE, a ſmall light veſſel, which can both row and ſail well, and is either for fighting or giving chace. It hath about twelve or fifteen benches for the rowers, one man to a bench: all the hands aboard are ſoldiers, and each man hath his muſquet lying ready under his oar.

BRIGG, a market-town in Lincolnſhire, about twenty-four miles north of Lincoln; weſt longitude 20′, and north latitude 53° 40′.

BRIGHTHELMSTON, a little port-town in Suſſex, about ſeven miles ſouth-weſt of Lewes: weſt longitude 10′, and north latitude 50° 50′.

BRIHUEGA, a town of new Caſtile, in Spain, about forty-three miles north-eaſt of Madrid; weſt longitude 3° 20′, and north latitude 41°.

BRILL, or BRIEL, the capital of the iſland of Voorn, in Holland, ſituated about twelve miles ſouth of the Hague; eaſt longitude 4°, and north latitude 51° 50′.

BRIMSTONE, in natural hiſtory, the ſame with ſulphur. See the article SULPHUR.

BRIN, a city of Moravia, dependent on Bohemia, about thirty miles ſouth-weſt of Olmutz; eaſt longitude 16° 20′ and north latitude 49° 14′.

BRINDISI, a port-town of the kingdom of Naples, ſituated on the gulph of Venice, about thirty five miles north-weſt of Otranto; eaſt longitude 18° 45′, and north latitude 40° 40′.

BRINE, water replete with ſaline particles; or pickle. See the article SALT.

BRINE-WATER, a ſalt water, which being boiled, turns into ſalt. See SALT.

Brine taken out of brine-pits, or brine-pans, uſed by ſome for curing or pickling of fiſh, without boiling the ſame into ſalt, and rock-ſalt without refining it into white-ſalt, are prohibited by 1 Anne, cap. xxi.

BRINGERS-UP, The whole laſt rank of a battalion, being the laſt men of each file, are called bringers-up.

BRINGING-IN *a horſe*, in the manege, the ſame as to ſay keep down the noſe of a horſe that boars, and toſſes his noſe in the wind: this is done by means of a good branch. See BANQUET and WIND.

BRIONY, or BRYONY. See BRYONY.

BRISAC, a fortified town of Swabia, in Germany, ſituated on the eaſtern ſhore of the river Rhine, about thirty miles north of Straſburg; eaſt longitude 7° 15′, and north latitude 48° 10′.

New BRISAC, a fortreſs on the weſtern ſhore of the Rhine, oppoſite to old Briſac. It is ſituated in Alſace, and belongs to the French.

BRISGOW, a territory of the circle of Swabia, in Germany, ſituated on the eaſt ſide of the Rhine, oppoſite to the upper Alſace, whereof Fribourg and Briſac are the chief towns.

BRISTLE, a rigid gloſſy kind of hair, found on ſwine, and much uſed by bruſh-makers, *&c.*

Briſtles, rough and undreſſed, pay a duty of 1 s. $2\frac{30}{100}$ d. the dozen pound, whereof 1 s. $\frac{23}{100}$ d. is drawn back on exporting them: whereas dreſſed briſtles pay a duty of 2 s. $4\frac{72}{100}$ d. the dozen pound; whereof 2 s. $1\frac{87}{100}$ d. is drawn back on exportation.

The whiſkers of cats are alſo ſometimes called briſtles; as are the quills of the porcupine.

BRISTOL, a city and port-town of England,

land, ſituated partly in Glouceſterſhire, and partly in Somerſetſhire; weſt longitude 2° 40′, and north latitude 51° 30′. It ſtands on the river Avon, about 115 miles weſt of London, and is a town of the greateſt foreign trade of any in Britain next to London. It is alſo a biſhop's ſee, ſends two members to parliament, and gives the title of earl to the noble family of Harvey.

New BRISTOL, the capital of the county of Bucks, in Penſilvania, about twenty miles north of Philadelphia. It is ſituated on the river Delawar, in 75° weſt long. and 40° 45′ north latitude.

BRISTOL-WATER. Theſe waters are the fourth in degree amongſt the waters which are eſteemed warm. The waters of Bath are the firſt, Buxton the ſecond, and Matlock the third.

Bath waters are beneficial, when the ſecretions from the blood are diminiſhed; Briſtol, when too much increaſed: Bath attennates powerfully; Briſtol incraſſates: Bath is ſpirituous, and helps defects; Briſtol is more cooling, and ſuppreſſes plenitude, with its conſequences, inflammations and hæmorrhages.

If we may judge of the contents of Briſtol waters, from their effects, which are exceedingly deterſive and healing, they partake chiefly of chalk, *lapis calcarius*, and *calaminaris*, the virtues of which are too dry to cleanſe; they fill ulcers with fleſh, and cicatrize them.

But whatever the ſubſtances are that impregnate them, it is plain they are very ſubtile, and that there is but little of a terreſtrial part in them, from their ſpecific lightneſs above other waters: yet when we conſider how agreeable to the ſight, ſmell and taſte; how clear, pure and ſoft they are; their gentle degree of heat, ſo adapted to ſundry diſeaſes, it muſt be concluded, that thoſe waters do imbibe ſome ſalutary particles in their paſſage through the earth, and from the many cures yearly wrought by them, that they have an undoubted title to a place in the firſt claſs of medicinal waters.

The diſeaſes in which Briſtol waters are properly preſcribed, are internal hæmorrhages, and inflammations, blood-ſpitting, dyſentery, and immoderate flux of the menſes, purulent ulcers of the viſcera: hence in conſumptions, the dropſy, ſcurvy with heat, ſtone, gravel, ſtrangury; the habitual gout, ſcorbutic rheumatiſm, diabetes, ſlow fevers, atrophy, pox, cancer, gleets in both ſexes, king's-evil, &c. in all theſe diſorders, Bath waters are not only improper, but hurtful; they rouſe the two languid, and quicken the too lazy circulation; they allay the heat, and reſtrain the too rapid motion of the blood. Thoſe impregnate the phlegmatic, theſe attemperate the choleric conſtitution. Bath water ſeems to be adapted to the maladies of the ſtomach, inteſtines, and nerves; Briſtol, to thoſe of the lungs, kidneys, and bladder: again, Bath waters are at variance with a milk courſe; and the Briſtol can never be judiciouſly directed, but where that may be joined, with reaſon and ſucceſs.

The Briſtol waters are taken medicinally only during the hot months, as from April to September.

BRITAIN, or GREAT-BRITAIN, the moſt conſiderable of all the european iſlands, lies between 50° and 60° north latitude, and between 2° eaſt longitude, and 6° weſt longitude.

The general diviſion of Britain, is into ſouth and north Britain, or England and Scotland. See ENGLAND and SCOTLAND.

New BRITAIN, a large country of north America, called alſo Terra Labrador, has Hudſon's bay and ſtrait on the north and weſt; Canada and the river of St. Lawrence, on the ſouth; and the Atlantic ocean, on the eaſt.

It is ſubject to Great-Britain, but yields only ſkins and furs.

BRITANNIC, in a general ſenſe, denotes ſomething belonging to Great Britain; but is more particularly applied to the king, who is ſtiled his Britannic Majeſty.

BRITANY, a province of France, ſurrounded by the engliſh channel and the bay of Biſcay, on the north, weſt, and ſouth; and bounded, on the eaſt, by the province of Orleanois.

BRITE, or BRIGHT, in huſbandry. Wheat, barley, or any other grain, is ſaid to brite, when it grows over ripe, and ſhatters.

BRITISH, ſomething belonging to Great Britain: thus, we ſay, the britiſh empire, britiſh iſlands, &c.

The britiſh empire comprehends all the dominions belonging to Great-Britain, in whatever part of the world; but the term ſeems to be more eſpecially uſed for the britiſh plantations in North America. Under the deſignation of britiſh iſlands are comprehended, Great-Britain, Ireland, and the iſles of Wight, Scilly, Man,

Man, &c. alſo the Orkney-iſlands, the Schetland-iſlands, and the weſtern-iſlands of Scotland. See the articles BRITAIN, IRELAND, &c.

BRITTLENESS, that quality of bodies, on account of which they are denominated brittle; or, which ſubjects them to be eaſily broken.

Brittle bodies are likewiſe very hard and durable, barring accidents; and it is remarkable, that tin, tho' tough in itſelf, makes all other metals brittle, when mixed with them.

BRIXEN, a city of Tyrol, in Germany, about fifty miles north-eaſt of Trent: eaſt long. 11° 45′, north lat. 46° 45′.

BRIZA, in botany, a genus of the triandria-digynia claſs of plants, whoſe corolla is compoſed of two valves; the lower valve is of the ſize and ſhape of the cup; the upper valve is ſmall, plane, and roundiſh, ſhutting up the hollow of the other: the corolla, ſerving in the place of a pericarpium, incloſes the ſeed, and when ripe, dropping it out: the ſeed is ſingle, very ſmall, roundiſh and compreſſed.

BRIZE, in huſbandry, denotes ground that has lain long untilled.

BRIZE-VENTS, ſhelters uſed by gardeners who have not walls on the north ſide, to keep cold winds from damaging their beds of melons. They are incloſures about ſix or ſeven feet high, and an inch or more thick; made of ſtraw, ſupported by ſtakes fixed into the ground, and props acroſs on both inſide and outſide; and faſtened together with willow-twigs, or iron-wire.

BROADALBIN, a diſtrict or country of Perthſhire, in Scotland, bordering upon Argyleſhire: it gives the title of earl to a branch of the noble family of Campbell.

BROADSIDE, in the ſea-language, denotes a volley of cannon, or a general diſcharge of all the guns on one ſide of a ſhip at once.

BROCADE, or BROCADO, a ſtuff of gold, ſilver, or ſilk, raiſed and enriched with flowers, foliages, and other ornaments, according to the fancy of the merchants, or manufacturers.

Formerly the word ſignified only a ſtuff, wove all of gold, both in the warp and in the woof, or all of ſilver, or of both mixed together; thence it paſſed to thoſe of ſtuffs in which there was ſilk mixed, to raiſe and terminate the gold or ſilver flowers: but at preſent all ſtuffs, even thoſe of ſilk alone, whether they be grograms of Tours or of Naples, ſattins, and even taffeties or luſtrings, if they be but adorned and worked with ſome flowers, or other figures, are called brocades.

BROCADE-SHELL, the engliſh name of the coronated cylindrus, of a ſilvery white colour, variegated with brown. See plate XXXII. fig. 3. and the article CYLINDRUS.

BROCATEL, or BROCADEL, a kind of coarſe brocade, chiefly uſed for tapeſtry. See the article BROCADE.

BROCCOLI, a kind of cabbage cultivated for the uſe of the table, the manner of dreſſing which is this: when their heads are grown to their full bigneſs, they are to be cut off, with about four inches of the tender ſtem; the outer ſkin is then to be ſtripped off the ſtem, after which they are to be waſhed, and boiled in a clean linen cloth, as is practiſed for cauliflowers. They are tenderer than any cauliflower, tho' very like them in taſte.

BROCK, among ſportſmen, a term uſed to denote a badger.

A hart too of the third year is called a brock, or brocket; and a hind of the ſame year, a brocket's ſiſter.

BRODERA, or BRODRA, a city of Aſia, in the country of the mogul and kingdom of Guzurat, where there is a great trade in cotton cloths: eaſt longitude 73° 30′, north latitude 22° 25′.

BROGLIO, a town of Piedmont, in Italy, ſituated near the frontiers of Provence, about twenty-five miles north-weſt of Nice; eaſt longitude 6° 42′, and north latitude 44° 12′.

It is the capital of a country of the ſame name.

BROKEN, in a general ſenſe, denotes ſomething divided into ſeveral parts. Hence, Broken numbers are the ſame with fractions. See the article FRACTION.

BROKEN RAY, the ſame with ray of refraction. See the article REFRACTION.

It is thus called, becauſe, in croſſing the ſecond medium, the ray of incidence changes its rectitude; being refracted, or broken, as it were.

BROKEN WIND, among farriers, is a malady that happens to a horſe when he is ſuffered to ſtand too long in the ſtable, without exerciſe: by this means he contracts groſs and thick humours in ſuch abundance, that adhering to the hollow parts of his lungs, they ſtop his wind-pipe.

This diſtemper is known by the horſe's heaving and drawing up his flanks together, and blowing wide his noſtrils.

To cure this diſorder, take the guts of a hedge-hog, dry them, and pound them to powder, and give the horſe two or three ſpoonfuls of it in a pint of wine or ſtrong ale; then mix the reſt with aniſſeed, liquorice, and ſweet butter, of which make round balls, or pills, and give him two or three of them after drink, and let him faſt two or three hours.

BROKER, a name given to perſons of ſeveral and very different profeſſions, the chief of which are exchange-brokers, ſtock-brokers, pawn-brokers, and brokers, ſimply ſo called, who ſell houſhold furniture, and ſecond-hand apparel.

Exchange-BROKERS are a kind of agents, or negociators, who contrive, propoſe, and conclude bargains between merchants, and between merchants and tradeſmen, in matters of bills of exchange, or merchandize, for which they have ſo much commiſſion. Theſe, by the ſtatute of 8 and 9 William III. are to be licenſed in London by the lord-mayor, who gives them an oath, and takes bond for the faithful execution of their offices. If any perſon ſhall act as broker, without being thus licenſed and admitted, he ſhall forfeit the ſum of 500 l. and perſons employing him 5 l. and brokers are to regiſter contracts, *&c.* under the like penalty: alſo brokers ſhall not deal for themſelves, on pain of forfeiting 200 l. They are to carry about with them a ſilver medal, having the king's arms, and the arms of the city, and pay 40 s. a year to the chamber of the city.

The exchange brokers make it their buſineſs to know the alteration of the courſe of exchange, to inform merchants how it goes, and to give notice to thoſe who have money to receive, or pay, beyond ſea; they are the proper perſons for negociating the exchange, and when the matter is accompliſhed, that is, when the money for the bill is paid, and the bill delivered, they have for brokerage 2 s. for 100 l. ſterling.

They reckon at Paris, among the city officers, who are employed under the juriſdiction of the provoſt of the merchants, and *echevins*, or aldermen, three ſorts of brokers.

1. The brokers of horſes for the carriage of merchandize by water; they are eſtabliſhed for the navigation, and take care to examine the horſes uſed to draw the boats up the river; to ſet the horſes together, to oblige the carriers to repair their boats, or to break ſuch as are no longer fit to ſerve.

2. Sworn wine-brokers on the keys, to examine and taſte all the wine that arrives there.

3. Brokers of bacon and lard. Theſe are eſtabliſhed to examine thoſe ſorts of merchandizes, as they are landed or unloaded, and to anſwer for their goodneſs to the buyer, and to the ſeller, for the price of his wares.

Stock-BROKERS are thoſe who are employed to buy and ſell ſhares in the joint ſtock of a company, or corporation.

As the practice of ſtock-jobbing has been carried on to ſuch an exceſs as became not only ruinous to a great number of private families, but even affected, or at leaſt might ſoon affect, the public credit of the nation, the legiſlature thought fit to put a ſtop to it, or at leaſt to bring it within certain bounds, and under ſome regulation, by ſtatute 7 Geo. II. c. viii. ſect. 1.

Pawn-BROKERS. Theſe are perſons who keep ſhops, and lend money upon pledges to neceſſitous perſons, and moſt commonly at an exorbitant intereſt. They are more properly ſtiled pawn-takers, or tally-men, ſometimes fripers, or friperers. Theſe are meant in 1 Jac. 1. cap. xxi. ſect. 5. where it is declared, that the ſale of goods wrongfully taken to any broker, or pawn-broker in London, Weſtminſter, Southwark, or within two miles of London, does not alter the property.

And ſect. 7. If a broker, having received ſuch goods, ſhall not, upon requeſt of the owner, diſcover them, how and when he came by them, and to whom they are conveyed, he ſhall forfeit the double value thereof, to be recovered by action of debt, *&c.*

In the cities of Italy, there are companies eſtabliſhed by authority for the letting out money on pawns, called mounts of piety; a title little becoming ſuch inſtitutions, as the loan is not gratis. In ſome parts of Italy, they have alſo mounts of piety of another kind, wherein they only receive ready money, and return it again with intereſt, at a certain ſum *per annum*.

At Bologna they have ſeveral ſuch mounts, which are diſtinguiſhed into frank and perpetual; the intereſt of the former

former is only four *per cent.* that of the latter, ſeven.

BROKERS are alſo thoſe who ſell old houſehold furniture, and wearing apparel, *&c.*

BROKERAGE, the fee paid to a broker for his trouble in negociating buſineſs between perſon and perſon. See BROKER.

BROMELIA, in botany, a genus of the hexandria monogynia claſs of plants, the calyx of which is a ſmall three-cornered permanent perianthium, ſitting upon the germen: the corolla conſiſts of three erect, narrow, ſpear-ſhaped petals, longer than the cup. The fruit is a roundiſh umbilicated berry, the ſeeds are numerous, oblong, obtuſe, and incumbent. This genus comprehends the ananas, pinguin, and karatas, of former botaniſts. See the articles ANANAS, *&c.*

BROMESGROVE, a market-town in Worceſterſhire, about ten miles north of Worceſter; weſt longitude 2° 5′, and north latitude 52° 26′.

BROMLEY, a market-town of Kent, ten miles ſouth-eaſt of London; eaſt longitude 5′, north latitude 51° 25.

BROMLEY is alſo the name of a market-town of Staffordſhire, about ten miles eaſt of Stafford: weſt longitude 1° 50′, and north latitude 52° 45′.

BROMUS, in botany, a genus of the triandria-digynia claſs of plants. The flower conſiſts of two valves of an ovato-oblong figure; the lower one is the larger, and emits a ſtrait ariſta; above the inſertion of this ariſta it is bifid: the upper valve has no ariſta. The fruit is nothing but the corolla that covers every way a ſingle oblong ſeed, convex on one ſide, and hollowed on the other. A decoction of the root of this plant is recommended for the worms in children.

BRON, or BRONNO, a town of the territory of Pavia, in the Milaneſe in Italy, ſituated on the ſouth ſide of the river Po, about twelve miles ſouth of Pavia; eaſt longitude 10°, north latit. 44° 50′.

BRONCHIA, in anatomy, the ramifications of the trachea.

The bronchia, in their origin, are formed of imperfect annuli, and in their progreſs of cartilaginous and membranous fruſtæ, very curiouſly connected and joined together. Theſe have their origin from the trachea; and after being ſubdivided into innumerable ramifications, finally terminate in thoſe ſmall veſicles which form the greater part of the ſubſtance of the lungs. Theſe veſicles have interſtices all the way between them, and adhere, as it were, to the branches of the bronchia, in the manner of cluſters of grapes. See the article LUNGS.

BRONCHIAL ARTERY, a veſſel allotted to the nutrition of the lungs.

It riſes ſometimes ſingle, ſometimes double, ſometimes triple, from the aorta and intercoſtals, and adheres every where firmly to the bronchia.

BRONCHIAL VEIN ariſes either from the intercoſtals, or from the vena azygos; accompanies the artery, and divides into the ſame number of branches with it. As the artery brings blood to the bronchia for the nutrition thereof, and of the veſicles of the lungs, ſo the vein carries off the blood again to the cava, where it ſoon terminates.

BRONCHOCELE, in ſurgery, a tumour ariſing in the anterior part of the neck, from the reſiſting flatus or air, ſome humour or other violence, as ſtraining in labour, lifting of weights, *&c.* This diſorder with us is frequently called a Derby-neck, on account of the inhabitants of that county being much ſubject to it; probably for the ſame reaſons that the inhabitants about the valleys of the Alps, and other mountainous countries, are ſo much affected with it; namely, the air or waters of the country. But it has not been yet explained, in what manner they operate to produce theſe effects. This tumour, when once become inveterate, is very difficultly, if ever, curable by medicines; but may be diſperſed, if it is recent. A leaden collar, mixed with mercury, prevents it from growing bigger, if it does not intirely diſperſe it. Some adviſe to rub it well with the hand or a bone of a dead man, and others direct to other ſuperſtitious means; but the moſt celebrated remedy is one that is ſold at Coventry, and kept a ſecret by the preparer. It is ordered to be laid under the tongue, every night upon going to bed.

BRONCHOTOMY, in ſurgery, an inciſion made in the aſpera arteria, or windpipe, which is neceſſary in many caſes, and eſpecially in a violent quinſey, to prevent ſuffocation from the great inflammation or tumour of the parts. It is alſo called laryngotomy and tracheotomy.

There are ſeveral methods of performing this operation; but that which exceeds the reſt, as being moſt eaſy and expeditious, and occaſioning the leaſt wound

and pain to the patient, is by an inſtrument conſiſting of a ſmall tube, in which is contained a triangular needle called a trochar. This inſtrument is ſo managed, as to paſs through the middle of the trachea by one puſh; and after drawing out the needle from the tube, the latter is left in the wound, till the patient recovers. Bronchotomy ſhould be performed in time, while there is ſufficient ſtrength and hopes of the patient's recovery; for when the patient is ſpent, it is uſually performed in vain. If a drowned perſon has but juſt expired, or not continued long under water, the moſt certain and expeditious way of recovering him, will be by opening the trachea with ſuch inſtrument as is neareſt at hand, and afterwards to inflate or blow into his lungs, either with the naked mouth, or with a tube.

BRONCHUS, βρογχος, according to Galen, is the aſpera arteria which reaches from the larynx to the lungs, conſiſting of the bronchia. See the article BRONCHIA. Sometimes it is put for the whole aſpera arteria; and Hippocrates uſes it to ſignify the throat.

BRONTIUM, βρονταιον, in grecian antiquity, a place underneath the floor of the theatres, in which were kept brazen veſſels full of ſtones and other materials, with which they imitated the noiſe of thunder.

BRONTOLOGY denotes the doctrine of thunder, or an explanation of its cauſes, phænomena, &c. together with the preſages drawn from it. See THUNDER.

BRONZE, a compound metal, two thirds of which conſiſts of copper, and one third of braſs.

In order to render it more ſolid, it is uſual to put a little more than one third of braſs, to which is added ſome fine tin.

BRONZES, a name given by antiquarians to figures either of men or beaſts, to urns, and, in general, to every piece of ſculpture which the antients made of that metal. We likewiſe give the name of bronzes to ſtatues, buſts caſt of bronze, whether theſe pieces be copies of antiques, or original ſubjects.

Among medalliſts, all copper metals bear the name of bronze.

BRONZING, the art of imitating bronze, which is done by means of copper duſt or leaf faſtened on the outſide, as gold leaves are in gilding. There are two ſorts of this colour, the red and the yellow, or golden. The latter is made ſolely of copper duſt, the fineſt and brighteſt that can be had; in the former is added a little quantity of red oker well pulveriſed; they are both applied with varniſh, and to prevent their turning greeniſh, the work muſt be dried over a chaffing-diſh, as ſoon as bronzed. See the article VARNISH.

BROOD, the young of fiſh and fowls.

The brood of ſea-fiſh is ſpawned, and lies in ſtill waters, where it may have reſt to receive nouriſhment, and grow to perfection; and here it is often deſtroyed by weirs, draw-nets, or nets with canvas or like engines in the bottoms of them, in harbours, havens, and creeks. Every weir, near the main ſea, takes, in twelve hours, ſometimes five buſhels, ſometimes twenty or thirty.

BROOK, a little, river, or ſmall current of water.

A brook is diſtinguiſhed from a river inſomuch, as a river flows at all times, whereas a brook flows at ſome particular ſeaſons only.

BROOK-LIME, in botany, the engliſh name of the water anagallis. See ANAGALLIS.

Brook-lime is moderately hot and moiſt, and ſaid to be good for cleanſing the blood; and, conſequently, recommended againſt the ſcurvy, dropſy, and ſtone.

BROOK-LIME is alſo the Engliſh name of the lateral cluſter-flowered veronica, with oval leaves and creeping ſtalks. See the article VERONICA.

BROOM, *geniſta*, in botany. See the article GENISTA.

Many gather the yellow buds of this plant, and pickle them with ſalt and vinegar, in the ſame manner as capers, from which they are not then to be diſtinguiſhed; the flowers are moſt in uſe, and are accounted ſplenetic, nephritic, and hepatic.

Broom is extremely pernicious to arable and paſture lands; and therefore ought, by all means, to be rooted up, which is the only method of killing it. On barren grounds, indeed, it is a good improvement; for beſides its uſe as fuel, it makes an excellent and laſting thatch, if well laid on.

Butcher's-BROOM, the engliſh name of a genus of plants, called by botaniſts ruſcus. See the article RUSCUS.

Spaniſh BROOM, in botany, the ſpartium of authors. See the article SPARTIUM.

This is an extremely beautiful ſhrub, which ſometimes grows to an incredible height.

BROOM-RAPE, in botany, the orobanche of botaniſts. See OROBANCHE.

BROOMING, or BREAMING *of a ſhip*, the waſhing

washing and burning off all the filth that she has contracted on her sides with weeds, straw, broom, or the like, when she is on the careen, or on the ground. See the article CAREENING.

BROSSÆA, in botany, a genus of plants mentioned by Plumier, the calyx of which is a perianthium, formed of a single leaf, divided into five segments, which terminate in erect acute points, of the length of the corolla; which is also formed by a single petal, and of a conic figure, the top truncated and undivided; the germen is pentacoccous; the style is subulated, and shorter than the corolla; the stigma simple; the fruit is a round capsule, divided by five furrows, containing five cells; the seeds are numerous and small.

BROTHER, *frater*, a term of relation between male children, sprung from the same parents, or from the same father, or the same mother.

The antients use the term brother, indifferently, to almost all who stood related in the collateral line, as uncles and nephews, cousins-german, *&c.*

According to the laws of Moses, the brother of a man, who died without children, was obliged to marry the widow of the deceased, in order to raise up children to him, that his name and memory might not be extinct. See the article WIDOW.

Among us, it is customary for kings to give the title brother to each other.

In the civil law, brothers, *fratres*, in the plural number, sometimes comprehends sisters.

Brother is also a customary term for priests of the same persuasion to address one another by: but it is more particularly used to denote the relation between monks of the same convent, as brother Zachary: In english, we more usually say, friar Zachary, from the french word *frere*, brother: preachers also call their hearers, my brethren, or my dear brethren; and sometimes they use the singular number, and say, my brother, or my dear brother. This appellation is borrowed from the primitive christians, who all called each other brothers: but it is now principally used for such of the religious as are not priests; those in orders are generally honoured with the title of father, whereas the rest are only simply brothers.

Lay-BROTHERS. See the article LAY.

In the military orders, the knights are also called brothers.

In the order of Malta, there is a particular class who are called serving brothers, consisting of such as cannot give proof of their nobility.

BROTHERS-GERMAN, *fratres germani*. See the article GERMAN.

BROTHERS by adoption. See ADOPTION.

Two brothers, who have only the same father, are called *fratres consanguinei*; and those who are only descended from the same mother, are called *fratres uterini*.

BROTHERS *of the rosy-cross*. See the article ROSYCRUCIAN.

Sworn BROTHERS, *fratres conjurati*. See the article FRATRES.

BROUAGE, a fortress in the territory of Santoign, in France, situated on a bay of the sea, about eighteen miles south of Rochelle; west longitude 1°, and north latitude 45° 50′.

BROUERSHAVEN, a port town of Zeland, in the united Netherlands, situated on the north side of the island of Schonen, about nine miles south-west of Helvoetsluys; east longitude 3° 55′, and north latitude 51° 50′.

BROW, or EYE-BROW, an hairy arch extended over the orbit of each eye.

The eye-brows are composed of hairs of a peculiar kind and a determinate length, all turned toward the temples; and under these, is a thick skin and some fat, by means of which they are raised and become more eminent. That part of the eye-brows, where they approach one to another about the root of the nose, is called their head; the opposite extremity is their tail. Their use is to prevent the sweat, trickling from the forehead, getting into the eyes, and for moderating the force of the light from overhead. See the article EYE.

BROW-ANTLER, among sportsmen, that branch of a deer's horn next the head.

BROWALLIA, in botany, a genus of plants of the didynamia-angiospermia class; the flower of which is monopetalous, of a funnel form; the fruit is an ovato-obtuse capsule, with only one cell, divided into four segments at the top, and containing several small seeds.

BROWN, among dyers, painters, *&c.* a dusky colour, inclining towards redness.

Of this colour there are various shades or degrees, distinguished by different appellations; for instance, spanish-brown, a sad-brown, a tawney-brown, the london brown, a clove-brown, *&c.*

Spanish-brown is a dark dull red, of a horse-flesh colour. It is an earth, and is

is of great uſe among painters, being generally uſed as the firſt and priming colour that they lay upon any kind of timber-work in houſe-painting. That which is of the deepeſt colour, and freeſt from ſtones, is the beſt. Though this is of a dirty brown colour, yet it is much uſed not to colour any garment, unleſs it be an old man's gown; but to ſhadow vermillion, or to lay upon any dark ground behind a picture, or to ſhadow yellow berries in the darkeſt places, when you want lake, &c. It is beſt and brighteſt when burnt in the fire, till it be red hot, although, if you would colour any hare, horſe, dog, or the like, it ſhould not be burnt; but, for other uſes, it is beſt when it is burnt, as for inſtance, for colouring wood, poſts, bodies of trees, or any thing elſe of wood, or any dark ground of a picture.

The method of dying browns is, by entering the cloth in a boiling bath of red wood ground and nut-galls bruiſed; and when it has boiled for two hours and a half, and has been cooled and aired, it is entered again in the ſame bath, to which a proportionable quantity of copperas muſt firſt be added. The ſadder you would have the brown, the more copperas muſt be put-in.

BROWN-WORT, in botany, a name given to two very diſtinct genuſes of plants, the brunella and ſcrophularia. See the articles BRUNELLA and SCROPHULARIA.

BROWNISTS, in church-hiſtory, a religious ſect, which ſprung up in England, towards the end of the XVIth century. Their leader was one Robert Brown, born at Northampton. They ſeparated from the eſtabliſhed church, on account of its diſcipline and form of government. They equally diſliked epiſcopacy and preſbyterianiſm. They condemned the ſolemn celebration of marriages in churches, maintaining, that matrimony being a political contract, the confirmation of it ought to proceed from the civil magiſtrate. They rejected all forms of prayer, and held, that the Lord's prayer was not to be recited as a prayer; being given only as a model, upon which to form our prayers.

BRUCHSAL, a town of the biſhopric of Spires, in the palatinate of the Rhine, in Germany; eaſt longitude 8° 30′, and north latitude 49° 15′.

BRUGES, a city and port-town of Flanders, eleven miles eaſt of Oſtend, and twenty-four north-weſt of Ghent; eaſt longitude 3° 5′, and north latit. 51° 16′. There is a navigable canal from Oſtend to Bruges, which has ſtill the beſt foreign trade of any town in Flanders.

BRUISE, in ſurgery, the ſame with contuſion. See the article CONTUSION.

BRUISING, in pharmacy, the cruſhing or pounding certain medicines, as roots, woods, &c. in a coarſe manner, to make them yield their virtues the more readily.

BRUMALIA, in roman antiquity, feſtivals of Bacchus celebrated twice a year; the firſt on the twelfth of the calends of March, and the other on the eighteenth of the calends of November. They were inſtituted by Romulus, who, during theſe feaſts, uſed to entertain the ſenate. Among other heathen feſtivals, which the primitive chriſtians were much inclined to obſerve, Tertullian mentions the brumæ or brumalia.

BRUNELLA, in botany, a genus of the didynamia-gymnoſpermia claſs of plants; the flower of which is monopetalous, with a ſhort cylindric tube. There is no pericarpium, but the cup contains four ſeeds, nearly of an oval figure.

The brunella, or ſelf-heal, is recommended in wounds of the lungs, and externally in the quinſey, and other diſeaſes of the throat. It is a very uſeful plant in all inflammatory diſeaſes, in hæmorrhages, dyſenteries, and in ſpitting of blood.

BRUNFELSIA, in botany, a genus of plants belonging to the pentandria-monogynia claſs; the flower of which conſiſts of a ſingle petal, of a funnel form; the fruit is a globoſe berry, with one cell containing numerous roundiſh ſeeds, placed cloſe to the integument of the berry.

BRUNIA, in botany, a genus of the pentandria-monogynia claſs; the flower of which conſiſts of five petals, with ſlender ungues of the length of the cup, and roundiſh patent bracteæ: there is no pericarpium, but the common receptacle of the fructifications ſeparates the perianthia by its hairy ſquamæ: the ſeeds are ſingle and ſomewhat hairy.

BRUNSBUTTEL, a port-town of Holſtein, in the circle of Lower Saxony, in Germany, ſituated at the mouth of the river Elbe; eaſt longitude 8° 42′, and north latitude 54° 10′.

It is ſubject to Denmark.

BRUNSWICK, the capital of the dutchy of Brunſwick, in the circle of Lower Saxo-

Saxony, in Germany, ſituated on the river Ocker, about thirty-five miles eaſt of Hanover; eaſt longitude 10° 30′, and north latitude 52° 30′.

The elector of Hanover is ſtiled duke of Brunſwick, though he has no property in, or dominion over, the city of that name, which belongs to the duke of Brunſwick Wolfembuttle.

BRUNT-ISLAND, a parliament-town on the coaſt of Fife, in Scotland, about ten miles north-weſt of Edinburgh; weſt longitude 3°, and north latitude 56° 12′.

BRUSH, an inſtrument made of briſtles, hair, wire, or ſmall twigs to clean cloaths, rooms, &c. and alſo to paint with. There are various ſorts of them, diſtinguiſhed by their ſhape or uſe. In the choice of painters bruſhes, obſerve whether the briſtles are faſt bound in the ſtocks, and if the hair be ſtrong and lie cloſe together; for if they ſprawl abroad, ſuch will never work well; and if they are not faſt bound in the ſtock, the briſtles will come out when you are uſing them, and ſpoil your work, as may be ſeen where the looſe hairs of the bruſh have lain up and down in the colours laid on, to the great detriment of the work.

Wire bruſhes are of uſe for ſcrubbing thoſe ſilver, copper, and braſs pieces, which are to be gilded over, in order to clear them perfectly from any dirt, ruſt, or filth, which may adhere to them, and, if not bruſhed off, would hinder the cloſing of the gold with them. They are therefore uſed by gilders, ſilverſmiths, &c. and are uſually ſold by ironmongers.

Beard bruſhes pay a duty, on importation, of 1 s. $3\frac{40}{100}$ d. the groſs or twelve dozen; whereof 1 s. $1\frac{1}{2}$ d. is drawn back on exporting them. Comb-bruſhes pay 2 s. $6\frac{80}{100}$ d. for the ſame number; and of this 2 s. 3 d. is repaid. Head-bruſhes pay 1 s. $3\frac{40}{100}$ d. the dozen: rubbing-bruſhes $3\frac{8}{100}$ d. the dozen: weavers-bruſhes $11\frac{55}{100}$ d. for the ſame number; in all which a proportionable draw-back is allowed. However, it is to be obſerved, that bruſhes are among the number of goods prohibited to be imported.

BRUSSELS, the capital of the province of Brabant, and of all the auſtrian Netherlands. It is ſituated on the river Senne, and is the ſee of a biſhop; eaſt longitude 4° 6′, and north latitude 50° 50′.

It is a ſtrong fortified town, and agreeably ſituated, which, together with the viceroy's reſidence, occaſions a great reſort of nobility and gentry.

BRUTE, an animal without the uſe of reaſon, or that acts by mere inſtinct, in which ſenſe it denotes much the ſame with beaſt, and comprehends all animals, excepting mankind.

Philoſophers, however, are far from being agreed on this ſubject; ſome making brutes mere machines, whilſt others raiſe them to the level of mankind, and allow them not only reaſon, but immortality. Perhaps thoſe come neareſt the truth, who, taking a middle courſe, allow brutes to have imagination, memory, and paſſion; but deny, that they have underſtanding or reaſon, at leaſt, in any degree comparable to that of mankind.

The ſagacity of many brutes is, indeed, admirable. Elephants, that have once eſcaped the trap, are extremely diſtruſtful ever after, carrying a bough of a tree about with them to try if the ground be ſound, before they will venture to tread on it. Examples of the great ſagacity of dogs, of the fox, and of other brutes, need not be quoted, being too generally known to be denied by the moſt ſceptical. On the other hand, what a prodigious difference is there between the ſagacity of brutes, and the reaſon of mankind? even thoſe who maintain an inſenſible gradation from one order of beings to another, muſt acknowledge that there is a vaſt chaſm here.

BRUTON, a market-town in Somerſetſhire, about ten miles ſouth-eaſt of Wells: weſt longitude 2° 35′, and north latitude 51° 15′.

BRYANSBRIDGE, a town of Ireland, in the county of Clare, and province of Connaught, ſituated on the river Shannon, about eight miles north of Limerick.

BRYONIA, or BRYONY. See the next article.

BRYONY, *bryonia*, in botany, a genus of the monoecia-ſyngeneſia claſs of plants; the flower of which conſiſts of a ſingle petal, divided into five deep ſegments; the fruit is a roundiſh berry, containing a few ſeeds, for the moſt part of an oval figure. See plate XXXII. fig. 5.

The expreſſed juice of the root of this plant, being of a bitter, acrid, and nauſeous taſte, is an attenuant and reſolvent. It powerfully diſſolves viſcid humours, and carries them off by ſtool, and ſometimes

times by vomiting; but it is a rough medicine, and muſt be given with great caution. It is given with ſucceſs in dropſies, aſthmas, hyſteric complaints, and even in palſies and epilepſies.

It is much the more powerful in all theſe intentions, when freſh; but it ſhould be corrected with an addition of cream of tartar, vinegar, or ſome aromatics.

BRYUM, WALL-MOSS, in botany, a genus of moſſes, conſiſting of a ſtalk furniſhed with leaves, which ariſe immediately from the root: on this ſtalk ſtands a ſeparate pedicle, with a conic capſule on its top, covered with a ſmooth operculum, and containing a fine powder. See plate XXXII. fig. 6.

The ſmoothneſs of the operculum, diſtinguiſhes the bryum from the polytrichum; and the growing of the pedicles only on the ſummits of the branches, diſtinguiſhes it from the hypnum.

BUBALUS, the BUFFALO, in zoology. See the article BUFFALO.

There is frequent mention of the bubalus in ſcripture: Moſes ſuffered the Hebrews to eat of it, and it was ſerved up at Solomon's table.

BUBBLE, *bullæ*, in philoſophy, ſmall drops or veſicles of any fluid filled with air, and either formed on its ſurface, by an addition of more of the fluid, as in raining, &c. or in its ſubſtance, by an inteſtine motion of its component particles.

Bubbles are dilatable or compreſſible, *i. e.* they take up more or leſs room, as the included air is more or leſs heated, or more or leſs preſſed from without, and are round, becauſe the included aura acts equally from within, all around; their coat is formed of minute particles of the fluid, retained either by the velocity of the air, or by the briſk attraction between thoſe minute parts and the air.

BUBBLE, in commerce, a cant term, given to a kind of projects for raiſing of money on imaginary grounds, much practiſed in France and England, in the years 1719, 1720, and 1721.

The pretence of thoſe ſchemes was the raiſing a capital for retrieving, ſetting on foot, or carrying on ſome promiſing and uſeful branch of trade, manufacture, machinery, or the like: to this end propoſals were made out, ſhewing the advantages to be derived from the undertaking, and inviting perſons to be engaged in it. The ſum neceſſary to manage the affair, together with the profits expected from it, were divided into ſhares or ſubſcriptions, to be purchaſed by any diſpoſed to adventure therein.

Bubbles, by which the public have been tricked, are of two kinds, *viz.* 1. Thoſe which we may properly enough term trading bubbles; and, 2. Stock or fund-bubbles. The former have been of various kinds; and the latter at different times, as in 1719 and 1720.

BUBO, in ornithology, the name by which zoologiſts call the great horn-owl, with a reddiſh-brown body. See STRIX.

This is an extremely ſingular and beautiful bird, about the ſize of a gooſe, and has much the figure of a cat: the auricles or horns, as they are called, are compoſed of a ſeries of black feathers, riſing to the height of three fingers breadth above the head, and perfectly reſembling ears. See plate XXXII. fig. 7.

BUBO, or BUBOE, in ſurgery, a tumour which ariſes, with inflammation, only in certain or particular parts to which they are proper, as in the arm-pits and in the groins. See the article TUMOUR.

The diviſion of a bubo is generally twofold, the benign and the malignant: a bubo is ſaid to be benign, when it ariſes ſpontaneouſly, without any preceding contagious and peſtilential diſeaſe, as they frequently do in infants: thoſe are alſo of this kind, which come after benign fevers, being a critical diſcharge of the diſeaſe: but the malignant are ſuch as happen in the peſtilence or venereal diſeaſe, and are therefore commonly termed peſtilential or venereal buboes.

With regard to the cauſes of benign buboes, they take their riſe from an inſpiſſation and obſtruction of the blood, ſo that they differ from other inflammations, only in the particular part where they are ſeated.

In buboes which are unaccompanied with any other diſeaſe, the frequent taking of ſome cathartic medicine, with an addition of merc. dulc. is found to be of great ſervice; other medicines, which attenuate the blood, ſhould be alſo uſed. When the inflammation is ſo gentle, as to give hopes of diſperſion, it may be proper to apply diſcutient plaſters externally, as emplaſt. dyachyl. ſimplex, de ſpermate ceti, de galbano, diaſaponis, &c.

But if the inflammation proves more violent, the pains more intenſe, and the diſcutient

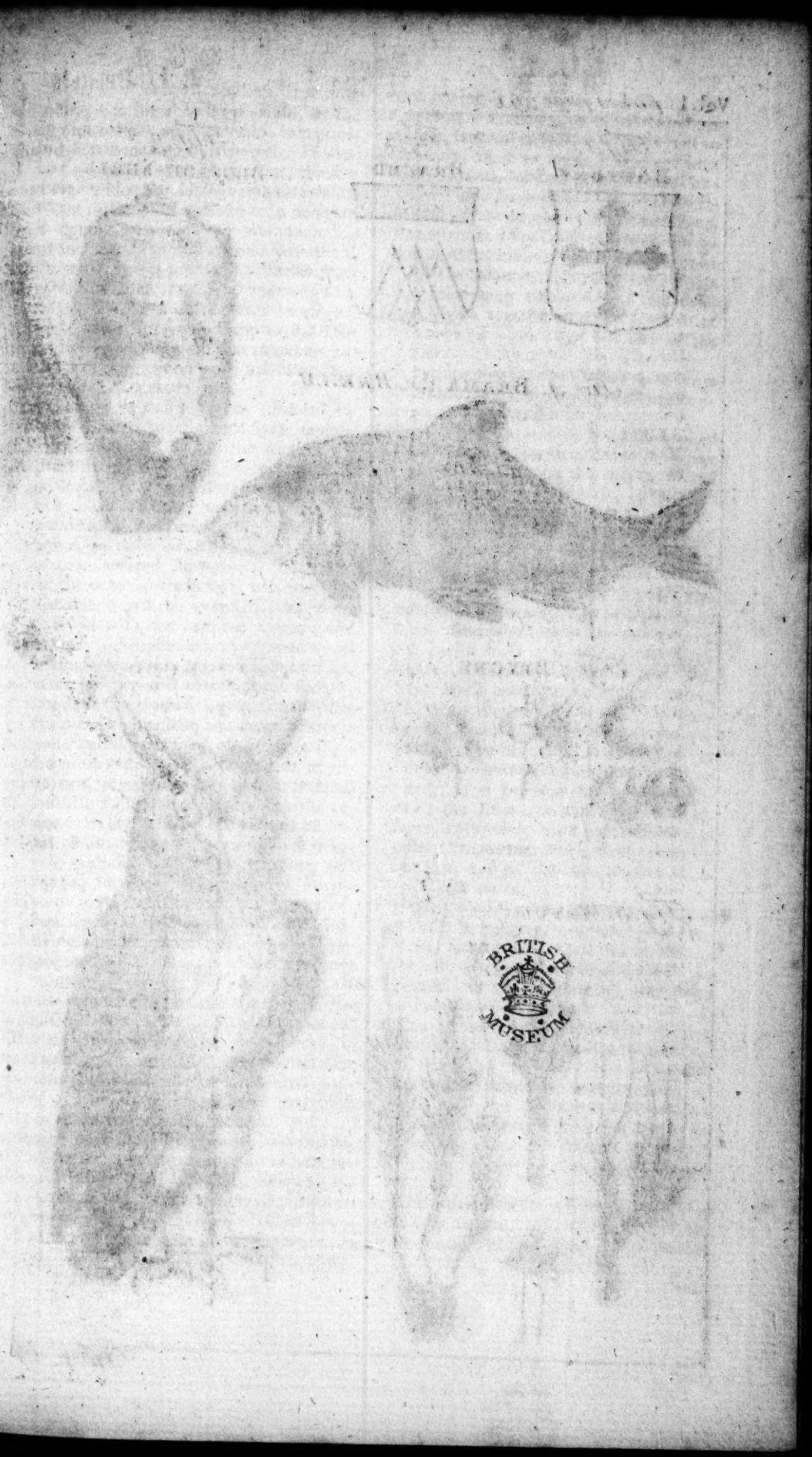

BRITISH MUSEUM

Fig. 1. BOTTONY.



Fig. 2. BRACED.



Fig. 3. BROCADE-SHELL.



Fig. 4. BRAMA, the *BREAM*.



Fig. 5. BRYONY.



Fig. 6. BRYUM.

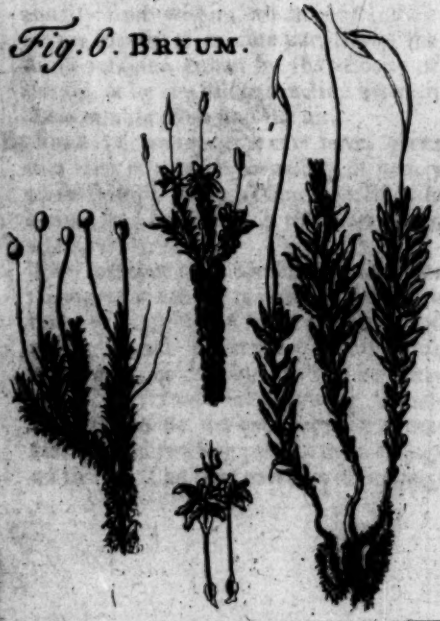


Fig. 7. BUBO.



J. Jefferys sculp.

cutient plaſters avail nothing, it will be proper to bring it to ſuppuration, by the application of emp. diachylon, cum gummis, or ſomething as effectual. If violent pains alſo affect the patient, the frequent application of digeſting cataplaſms warm to the part, will not only mitigate the pain, but alſo greatly promote a diſperſion, or elſe a digeſtion and maturation.

Peſtilential BUBOS are diſtinguiſhable from other tumours, by their happening at a time, and in conjunction with the plague, and from their being accompanied, in the patient, with the ſymptoms proper to that diſtemper: theſe tumours are ſometimes joined with carbuncles.

It is not, without reaſon, affirmed by ſome of the more learned and modern phyſicians, that almoſt the whole buſineſs of curing the plague conſiſted in carefully promoting the eruption of bubos. The patient, upon the firſt appearance of the tumours, ſhould keep the houſe, or rather keep in a warm bed, to be more ſecure from the air.

In the external treatment, it is very ſerviceable to rub the tumified part pretty ſtrongly with the hands or cloths; and what is ſtill preferable, to apply external maturative and emollient medicines, whereby they will come out the ſooner; the patient will alſo find great benefit from the uſe of a cataplaſm, made ex fermento panis callido, vel ſolo, vel cum ſale atque ſinapi contrito. To the external applications, it will be proper to join internal medicines, by the help of which the venom, lurking in the body, may be expelled in a gentle ſweat; but ſuch ſudorific medicines, as are very ſtrong and heating, have been always found dangerous and pernicious by modern phyſicians. In ſome caſes, the tumour turns ſuddenly to ſuppuration, and in others it remains for ſome weeks, without being any thing ſofter. When this is the caſe, it is neceſſary to continue the uſe of the forementioned remedies, till the tumour either breaks of itſelf, or is fit to be opened, like other abſceſſes, by inciſion with the ſcapel, that the peſtilential matter may be diſcharged, and prevented from returning into the blood.

Venereal BUBO, a tumour with pain and inflammation, ariſing in the groin or armpits, after contact with an impure woman, who is afflicted with the venereal diſeaſe. The moſt certain ſigns of bubos being venereal, are, the patients having to do with theſe women, and from their being, and having been, accompanied with gonorrhœas, chancres, or other ſymptoms of the venereal diſeaſe. With regard to the cure, there are many phyſicians who hold, that the diſperſion of venereal bubos are equally improper, as in the peſtilential; they therefore judge it neceſſary, to abſtain entirely from bleeding, purging, and to forward the tumour to ſuppuration as faſt as poſſible: however, others are for taking cathartic and mercurial medicines, together with a decoction of the woods, and other purifiers of the blood.

The diſperſion is to be effected with large doſes of merc. dulc. as is uſual in carrying off gonorrhœas.

Externally to the tumour ſhould be applied ſome diſcutient plaſters, as thoſe in the peſtilential tumours: the patient ſhould keep a regular diet and courſe of life, and ſhould abſtain from ſtrong liquors.

The ſuppuration is to be promoted much in the ſame manner, as mentioned in the benign and peſtilential tumour.

The internal medicines ſhould be a decoction of the woods, two or three times a day, from eight to twelve ounces at a time, with thirty or forty drops of eſſent. lignor. pimpinellæ, aluæ fumariæ, &c.

It is to be opened as the peſtilential bubo.

BUBON, in botany, a genus of the pentandria-digynia claſs of plants; the general corolla of which is uniform; the ſingle flowers conſiſt each of five oblong petals, of a lanceolated figure, and inflex; the fruit is naked, oval, ſtriated, hairy, coronated, and ſeparable into two parts; the ſeeds are two, oval, plane on one ſide, and on the other convex, ſtriated, and hairy.

BUBONOCELE, or HERNIA INGUINALIS, in ſurgery, a tumour in the inguen, formed by a prolapſus of the inteſtines, omentum, or both, through the proceſſes of the peritonæum, and rings of the abdominal muſcles.

The bubonocele may ariſe from two cauſes, *viz.* a relaxation of the peritonæum and rings of the abdominal muſcles, or ſome violent contraction and preſſure of the abdominal muſcles upon the inteſtines, as in jumping, lifting of great weights, coughing, blowing a trumpet, riding on horſe-back, a fall, &c.

When this diſorder is formed inſenſibly, and by degrees, it is attended with but few and ſlight ſymptoms: when it ariſes from violent colds, exerciſes, eating too

plentifully of groſs and flatulent food, which will exaſperate the diſorder, the conſequence will be violent pain and inflammation, ſickneſs, vomiting, and the iliac paſſion: it may be farther diſcovered from the tumour occaſioned thereby in the groin, which proceeds up to the ring of the abdominal muſcles; and when the inteſtine is not incarcerated, but returnable into the abdomen, the tumour ſubſides upon lying down. When the bubonocele is incarcerated, ſo that the parts, forming the tumour, are not returnable into the abdomen, it uſually appears with a greater reſiſtance to the touch, redneſs, and inflammation.

Theſe ruptures are often attended with danger, eſpecially the incarcerated ones, in which, if the inteſtine be not timely returned, but the ſtricture continues two or three days, red and livid ſpots appear upon the tumour, which denote a ſphacelus or mortification; and if an univerſal cold ſweat ſeizes the patient, he has generally but a few hours to live. When the omentum alone falls down, there is leſs danger than when it is accompanied with the inteſtines.

When the inteſtine is returnable, the patient ſhould be laid on his back, with his thigh a little bent, to relax the integuments; then the tumour is to be gently preſſed, or returned with the hands and fingers, after which a plaſter and compreſſure are to be applied to the part affected, and retained with a proper truſs, and a girdle or bandage, without taking them off for ſeveral months, or longer, as there is occaſion. See the article TRUSS.

When the inteſtine is not returnable, then the operation of inciſion becomes abſolutely neceſſary, in order to dilate the parts. However, the ſurgeon may firſt try the repeated uſe of cataplaſms, ointments, and laxative clyſters, after bleeding; whereby the ſtricture is ſometimes removed, and the inteſtine may be returned by the finger, without much difficulty.

BUCCANEERS, thoſe who dry and ſmoke fleſh or fiſh, after the manner of the Americans.

This name is particularly given to the french inhabitants of the iſland of St. Domingo, whoſe whole employment is to hunt bulls or wild boars, in order to ſell the hides of the former, and the fleſh of the latter.

The buccaneers are of two ſorts: the buccaneers ox-hunters, or rather hunters of bulls and cows; and the buccaneers boar hunters, who are ſimply called hunters; though it ſeems, that ſuch a name be leſs proper to them than to the former; ſince the latter ſmoke and dry the fleſh of wild boars, which is properly called buccaneering, whereas the former prepare only the hides, which is done without buccaneering.

Buccaneering is a term taken from buccan, the place where they ſmoke their fleſh or fiſh, after the manner of the ſavages, on a grate or hurdle, made of braſil wood, placed in the ſmoke, a conſiderable diſtance from the fire; this place is a hut, of about twenty-five or thirty feet in circumference, all ſurrounded and covered with palmetto leaves.

BUCCELLARII, an order of ſoldiery under the greek emperors, appointed to guard and diſtribute the ammunition-bread; though authors are ſomewhat divided as to their office and quality. Among the Viſigoths buccellarius was a general name for a client or vaſſal, who lived at the expence of his lord. Some give the denomination to paraſites in the courts of princes, ſome make them the body guards of emperors, and ſome fancy they were only ſuch as emperors employed in putting perſons to death privately.

BUCCINA, an antient muſical and military inſtrument. It is uſually taken for a kind of trumpet, which opinion is confirmed by Feſtus, by his defining it a crooked horn, played on like a trumpet. Vegetius obſerves, that the buccina bent in a ſemicircle, in which reſpect it differed from the tuba or trumpet. It is very hard to diſtinguiſh it from the cornu or horn, unleſs it was ſomething leſs, and not quite ſo crooked; yet it certainly was of a different ſpecies, becauſe we never read of the cornu in uſe with the watch, but only the buccina. Beſides, the ſound of the buccina was ſharper, and to be heard much farther, than either the cornu or the tuba. In ſcripture, the like inſtrument, uſed both in war and in the temple, was called rams-horns, kiren-jobel, and ſopheroth hagijobelim.

BUCCINATOR, in anatomy, a muſcle on each ſide of the face, common to the lips and cheeks. The origin of the buccinator is partly from the anterior and lower part of the coronoide proceſs of the lower jaw, and partly about the roots of the poſterior dentes molares of both jaws. Its progreſs, as the head is erect, is nearly horizontal; its termination is at the angle of the lips. Its uſes are to bring the food into the way of the teeth, and the

the ſalival duct of Steno perforates it in the middle.

BUCCINUM, the TRUMPET-SHELL, a genus of univalve ſhells, ſhaped, in ſome degree, like a horn, or other wind-inſtrument: the belly of the ſhell is diſtended, the aperture of the mouth is large, wide, and elongated, the tail is more or leſs long, and the clavicle more or leſs exterted.

This is a very numerous genus, the principal ſpecies of which are the ſpindle-ſhell, the mitre-ſhell, the midas-ear-ſhell, the great triton-ſhell, the tower of Babel-ſhell, &c. See plate XXXIII. fig. 1. where n° 1. repreſents the mitre-ſhell; n° 2. the rough buccinum; and n° 3. the tower of Babel-ſhell.

BUCENTAUR, a galeas, or large galley of the doge of Venice, adorned with fine pillars on both ſides, and gilt over from the prow to the ſtern. This veſſel is covered over head with a kind of tent, made of purple ſilk. In it the doge receives the great lords and perſons of quality that go to Venice, accompanied with the ambaſſadors and counſellors of ſtate, and all the ſenators ſeated on benches by him. The ſame veſſel ſerves alſo in the magnificent ceremony of aſcenſion day, on which the doge of Venice throws a ring into the ſea to eſpouſe it, and to denote his dominion over the gulph of Venice.

Bucentaur is alſo the name of a ſhip, as great and as magnificent as that of the Venetians, built by order of the elector of Bavaria, and launched on a lake, which is ſix leagues in length.

BUCEPHALON, in botany, a genus of plants, the claſs of which is not yet fully aſcertained. There is no corolla: the fruit is an oval, but ſomewhat quadrangular berry, with one cell, containing a brittle ſeed.

BUCEROS, in ornithology, a genus of birds of the order of the picæ, common in ſeveral parts of the Eaſt-Indies: the beak towards its baſe has a large gibboſity riſing above the reſt of its ſurface, and turning backwards at the point; and the upper chap of the beak is in this genus conſiderably longer than the under. This genus comprehends no leſs than three ſpecies, the black buceros with a great head, or the Indian raven, &c.

BUCHAN, a country or diſtrict of Aberdeenſhire, in Scotland: it gives the title of earl to the noble and antient family of Erſkine.

BUCHAW, an imperial city of Swabia, in Germany, about twenty-five miles ſouth-weſt of Ulm: eaſt long. 9° 40′, and north lat. 48° 5′.

BUCHNERA, in botany, a genus of the didynamia-angioſpermia claſs of plants; the flower of which is monopetalous, with five equal and obverſely cordated ſegments at its edge; the fruit is an ovato-oblong capſule, with two cells divided at the top, and containing numerous angulated ſeeds.

BUCHOREST, a town of Wallachia, ſubject to the Turks; eaſt longitude 26° 30′, and north latitude 44° 20′.

BUCHORN, a city of Swabia, in Germany, ſituated on the eaſt ſide of the lake of Conſtance, and about twelve miles eaſt of the city of Conſtance: eaſt long. 9° 20′, and north lat. 47° 40′.

BUCK, among ſportſmen, in his firſt year, is called a fawn; the ſecond, a pricket; the third, a ſorel; the fourth, a ſore; the fifth, a buck of the firſt head; and the ſixth, a great buck. This beaſt is common in moſt countries, being corpulent as a hart, but in ſize reſembling more a roe, except in colour: the males have horns, which they loſe yearly; the females none at all. As for the colour, it is very different; however, they are moſtly branded and ſandy, with a black liſt all along the back. Their fleſh is excellent for nouriſhment.

BUCK-HUNTING. Leſs art and ſkill are required in lodging a buck, than in harbouring a hart; nor does there need ſo much drawing after: it is ſufficient that you judge by the view, and mark what grove or covert he enters. When hard hunted, he uſually takes to ſome ſtrong hold he is acquainted with; not flying before the hounds, nor croſſing, nor doubling, nor uſing any of the ſubtileties the hart is accuſtomed to. The buck herds more than the hart does, and chuſes to lie in the drieſt places. He groans and trots as the hart belleth, and with a worſe noiſe and rattling in the throat, leaps higher at the rut than the ſtag. The bucks mew or ſhed their horns every year about April or May; and their new ones are burniſhed about the end of Auguſt. They make their fewmiſhings in divers forms, according to the diverſity of food; but they are moſt commonly round.

Now the greateſt care of the huntſman muſt be employed in preventing the hunting counter or change, becauſe of

the plenty of fallow deer, which uſe to come more directly upon the hounds than the red deer do. The buck comes in ſeaſon the 8th of July, and goes out the 14th of September.

BUCK-BEAN, in botany, the *trifolium paluſtre*, or marſh trefoil of authors. See the article TREFOIL.

BUCK'S-HORN PLANTAIN, the coronopus of botanical writers. See CORONOPUS.

BUCK-MAST denotes the maſt of the beech-tree. See the article BEECH.

BUCK-THORN, the engliſh name of the rhamnus of botaniſts. See RHAMNUS.

BUCKET, a ſmall portable veſſel to hold water, often made of leather for its lightneſs and eaſy uſe in caſes of fire.

It is alſo the veſſel let down into a well, or the ſides of ſhips, to fetch up water.

BUCKING, the firſt operation in the whitening of linen-yarn or cloth: it conſiſts in pouring hot water upon a tubful of yarn, intermingled with ſeveral ſtratums of fine aſhes of the aſh-tree. See the article BLEACHING.

BUCKINGHAM, a borough-town of Buckinghamſhire, about forty-ſix miles north-weſt of London: weſt longitude 1°, and north latitude 51° 50′.

It ſends two members to parliament.

Buckinghamſhire has Northamptonſhire on the north; Bedfordſhire, Hertfordſhire, and Middleſex, on the eaſt; Berkſhire, from which it is divided by the river Thames, on the ſouth; and Oxfordſhire, on the weſt.

BUCKLE, a well known utenſil, made of divers ſorts of metals, as gold, ſilver, ſteel, braſs, &c.

The faſhion, or form, of buckles is various; but their uſe, in general, is to make faſt certain parts of dreſs, as the ſhoes, garters, &c.

Buckles for girdles pay a duty of 3 s. $10\frac{20}{100}$ d. the groſs, or twelve dozen; whereof 1 s. $4\frac{1}{2}$ d. is drawn back on exportation. Buckles for girts pay likewiſe a duty of 1 s. $5\frac{32}{100}$ d. the groſs; and both theſe pay ſomewhat more if of braſs. But it is to be obſerved, that all buckles are prohibited to be imported.

BUCKLER, a piece of defenſive armour uſed by the antients. It was worn on the left arm, and compoſed of wickers woven together, or wood of the lighteſt ſort, but moſt commonly of hides, fortified with plates of braſs or other metal. The figure was ſometimes round, ſometimes oval, and ſometimes almoſt ſquare. Moſt of the bucklers were curiouſly adorned with all ſorts of figures of birds and beaſts, as eagles, lions; nor of theſe only, but of the gods, of the celeſtial bodies, and all the works of nature; which cuſtom was derived from the heroic times, and from them communicated to the Grecians, Romans, and Barbarians.

Votive BUCKLERS. Thoſe conſecrated to the gods, and hung up in their temples, either in commemoration of ſome hero, or as a thankſgiving for a victory obtained over an enemy; whoſe bucklers, taen in war, were offered as a trophy.

BUCKNHAM, or BUCKENHAM, a market-town of Norfolk, about nine miles eaſt of Thetford; eaſt longitude 1° 10′, north latitude 52° 30′.

BUCKOR, a province of the Eaſt-Indies, ſituated on the river Indus, having the province of Multan on the north, and Tatta on the ſouth.

BUCKRAM, in commerce, a ſort of coarſe cloth made of hemp, gummed, calendered, and dyed ſeveral colours. It is put into thoſe places of the lining of a garment, which one would have ſtiff and to keep their forms. It is alſo uſed in the bodies of women's gowns; and it often ſerves to make wrappers to cover cloths, ſerges, and ſuch other merchandizes, in order to preſerve them and keep them from the duſt, and their colours from fading. Buckrams are ſold wholeſale by the dozen of ſmall pieces or remnants, each about four ells long, and broad according to the pieces from which they are cut. Sometimes they uſe new pieces of linen cloth to make buckrams, but moſt commonly old ſheets and old pieces of ſails.

Carrick buckram pays a duty of $5\frac{74}{100}$ d. the ſhort piece; whereof $5\frac{17}{100}$ d. is repaid on exporting it. Eaſt-country buckram pays 1 s. $2\frac{26}{100}$ d. the roll, or half piece; whereof 1 s. $\frac{23}{100}$ d. is drawn back. French buckram pays 1 l. 13 s. $10\frac{12}{100}$ d. the dozen pieces; whereof 1 l. 10 s. $1\frac{87}{100}$ d. is repaid. Fine german buckram pays 2 s. $4\frac{72}{100}$ d. the piece; whereof 2 s. $1\frac{87}{100}$ d. is drawn back on exportation.

BUCOLIC, in antient poetry, a kind of poem relating to ſhepherds and country-affairs, which, according to the moſt generally received opinion, took its riſe in Sicily. Bucolics, ſays Voſſius, have ſome conformity with comedy. Like it, they are pictures and imitations of ordinary life; with this difference, however, that comedy

comedy represents the manners of the inhabitants of cities, and bucolics, the occupations of country people. Sometimes, continues he, this laſt poem is in form of a monologue, and ſometimes of a dialogue. Sometimes there is action in it, and ſometimes only narration; and ſometimes it is compoſed both of action and narration. The hexameter verſe, is the moſt proper for bucolics in the greek and latin tongues. Moſchus, Bion, Theocritus and Virgil, are the moſt renowned of the antient bucolic poets. See the articles ECLOGUE and IDYLLION.

For the nature of this kind of poem, and the ſtile and ſubjects which it requires, ſee the article PASTORAL.

BUD, among gardeners, that part of a ſeed which firſt begins to ſprout, or rather the leaves firſt put forth: theſe in ſome plants are two; in others, four; and in others again, ſix, or even more.

BUD is alſo uſed for the ſprout from whence a branch ariſes. See BRANCH.

BUD, in country-affairs, likewiſe denotes a weaned calf of the firſt year; ſo called, becauſe the horns are then in the bud.

BUDA, the capital of lower Hungary, about 130 miles ſouth-eaſt of Vienna: it ſtands on the ſide of a hill, on the ſouth-weſt ſide of the Danube, and is well fortified and defended by a caſtle, eſteemed one of the ſtrongeſt fortreſſes in Hungary; eaſt longitude 19° 20′, and north latitude 47° 40′.

BUDDESDALE, a market-town of Suffolk, about thirteen miles north-eaſt of Bury; eaſt longitude 1° 10′, and north latitude 52° 25′.

BUDDLE, in mineralogy, a large ſquare frame of boards, uſed in waſhing the tin ore. See the article WASHING *of Ores*.

BUDDLEIA, in botany, a genus of the tetrandria-monogynia claſs of plants, the flower of which conſiſts of a ſingle petal, lightly divided into four oval, acute ſegments, and three times as large as the cup. The fruit is an oval, oblong capſule bifulcated, with two cells, containing numerous and very ſmall ſeeds.

BUDDLING, the act of cleanſing, or waſhing any ore. See WASHING *of Ores*.

BUDDLING-DISH is a ſmall, ſhallow veſſel, for the waſhing ores with the hand.

BUDGE-BARRELS, among engineers, ſmall barrels well hooped, with only one head; on the other end is nailed a piece of leather, to draw together upon ſtrings like a purſe. Their uſe is for carrying powder along with a gun or mortar, being leſs dangerous, and eaſier carried, than whole barrels. They are likewiſe uſed upon a battery of mortars, for holding meal powder.

BUDINGEN, the capital of a county of the ſame name in Germany, ſituated in the circle of the upper Rhine, about twenty miles north-eaſt of Francfort.

BUDOA, a city of Dalmatia, ſituated on the gulph of Venice, in 19° 20′ eaſt long. and 42° 15′ north lat.

It is a biſhop's ſee.

BUDWEIS, a town of Bohemia, ſituated on the river Muldaw, about ſixty-five miles ſouth of Prague; eaſt longitude 14° 20′, north latitude 49°.

BUDZIAC TARTARY, a country ſubject to the Turks, ſituated on the rivers Neiſter, Bog, and Nieper; having Poland and Ruſſia, on the north; little Tartary, on the eaſt; the black ſea on the ſouth; and Beſſarabia, on the weſt.

BUENOS-AYRES, one of the moſt conſiderable ſpaniſh ports on the eaſt coaſt of South America, ſituated on the ſouthern ſhore of the river Plata, and about fifty leagues from its mouth; and yet here the river is full ſeven leagues broad; weſt long. 60°, ſouth lat. 36°.

It is a ſtrong fortified town.

BUFF, in commerce, a ſort of leather prepared from the ſkin of the buffalo, which dreſſed with oil, after the manner of ſhammy, makes what we call buff-ſkin. This makes a very conſiderable article in the french, engliſh, and dutch commerce at Conſtantinople, Smyrna, and all along the coaſt of Africa. The ſkins of elks, oxen, and other-like animals, when prepared after the ſame manner as that of the buffalo, are likewiſe called buffs.

Of buff-ſkin, or buff-leather, are made a ſort of coats for the horſe, or gens d'arms of France, bandaliers, belts, pouches and gloves.

In France, there are ſeveral manufactories deſigned for the dreſſing of thoſe ſort of hides, particularly at Corbeil, near Paris; at Niort, at Lyons, at Rone, at Etanepus, at Cone. The manner of preparation, ſee under the article SHAMMY.

BUFFALO, *bubalus*, in zoology, an animal of the ox-kind, with very large, crooked, and reſupinated horns. See plate XXXII. fig. 2.

It is equal in ſize to our biggeſt oxen: the head is very large, the forehead remarkably broad, and the aſpect very fierce and terrible: the eyes are large and prominent, the ears long and patulous, the horns

horns very thick at the baſe, but ſharp at the point: the neck is thick and remarkably ſhort; the fleſh hangs very looſe under the throat: the body is more bulky in proportion than in our bull; and the legs are thicker, but about equal in length. The colour is uſually a blackiſh grey: but in this there is a great variety. The buffalo is a native of the eaſt, but has been introduced into Italy, and ſome other parts of Europe, where it is kept as a beaſt of burden and draught.

The buffalo affords for trade, his horns, his hide, and his hair. Of the horns are made ſeveral turner's works, particularly beads for chaplets and ſnuff-boxes, which are pretty much valued. The hair being ſeparated from the hide, by means of lime, is uſed as a ſort of flocks. As to the hide, ſee the preceding article BUFF.

BUFFET was antiently a little apartment ſeparated from the reſt of the room by ſlender wooden columns, for the diſpoſing of china, glaſs-ware, &c.

It is now properly a large table in a dining-room, called alſo a ſide-board, for the plate, glaſſes, bottles, baſons, &c. to be placed on, as well for the ſervice of the table, as for magnificence. In houſes of perſons of diſtinction in France, the buffet is a detached room, decorated with pictures relative to the ſubject, with fountains, ciſterns and vaſes. It is commonly faced with marble or bronze.

BUFFOON, a droll or mimic who diverts the public by his pleaſantries and follies.

BUFONIA, in botany, a genus of the diandria digynia claſs of plants, the calyx of which is a permanent perianthium, conſiſting of four erect, ſubulated, carinated leaves; the corolla conſiſts of four oval, linear, entire, erect, equal petals, ſhorter than the cup: the fruit is an oval compreſſed capſule, conſiſting of two valves, and containing one cell, in which are two oval compreſſed ſeeds.

BUFONITÆ, in natural-hiſtory, a kind of extraneous foſſils, otherwiſe called lycodontes, or wolf's teeth. See the article LYCODONTES.

BUG, a river, which, taking its riſe in red Ruſſia in Poland, runs northward to Breſte; and then, turning weſtward, falls into the Weiſel, or Viſtula, below Warſaw.

BUG, or BUGG, in zoology, the engliſh name of a genus of inſects, called by authors cimices. See the article CIMEX.

The houſe bug, or cimex lectularius, ſo extremely troubleſome about beds, is of a roundiſh figure, and of a dark cinnamon colour.

In order to deſtroy theſe vermin, let the bed-ſteads be waſhed with oil of turpentine, or painted over with verdigriſe ground in linſeed and oil of turpentine. Or, boil wormwood, rue, common oil, and water together, till the water is conſumed; then, after ſtraining, make it into an ointment with a good quantity of greaſe or ſulphur: with this rub the chinks and other places, where the bugs are ſuppoſed to be. Or, mix hemp, oil, and ox-gall together; with which rub the bed-ſtead all over, and the bugs will not come near it. Or, pound equal quantities of black ſoap and common ſoap together; then mixing as much of quickſilver with it, let the buggy places be rubbed with this mixture.

BUG is alſo a name ſometimes given to the chermes inſect. See CHERMES.

Green-houſe BUG, the coccus of the orange tree. See the article COCCUS.

BUGGASINS, in commerce, a name given to buckrams made of callico: theſe pay a duty on importation of 1 s. $2\frac{16}{100}$ d. the half piece; whereof 1 s. $\frac{93}{100}$ d. is drawn back on exportation.

BUGGERS, in church-hiſtory, the ſame with bulgarians, a ſect of heretics which amongſt other errors held, that men ought to believe no ſcripture but the New Teſtament; that baptiſm was not neceſſary to infants; that huſbands who converſed with their wives, could not be ſaved; and that an oath was abſolutely unlawful.

BUGGERY is defined by Sir Edward Coke to be a carnal copulation againſt nature, either by the confuſion of ſpecies; that is to ſay, a man or woman with a brute beaſt; or ſexes, as a man with a man, or man unnaturally with a woman. It is ſaid, that this ſin againſt God and nature, was firſt brought into England by the Lombards; and antiently, according to ſome writers, it was puniſhable with burning; but others ſay, with burying alive. It is, by ſtatute, felony without benefit of clergy, and is always excepted out of a general pardon.

BUGIA, a port-town of the kingdom of Algiers, in Africa, ſituated about ſixty miles eaſt of the city of Algiers; eaſt longitude 4°, north latitude 35° 30′.

BUGIE, a port-town of Egypt, ſituated on the weſtern ſhore of the Red-ſea, almoſt

oppoſite

oppoſite to Ziden, the port-town to Mecca, and about 100 miles weſt of it; eaſt long. 36°, north lat. 22°.

BUGLE, *ajuga*, in botany. See AJUGA.

BUGLOSS, *bugloſſum*, in botany, a name given to ſeveral very diſtinct genera of plants, as the anchuſa, lycopſis, and aſperugo. See the articles ANCHUSA, *&c.*

Viper's BUGLOSS, the engliſh name of the echium of botaniſts. See ECHIUM.

BUILDING, a fabric erected by art, either for devotion, for magnificence, or for conveniency.

Regular BUILDING is that whoſe plan is ſquare, the oppoſite ſides equal, and the parts diſpoſed with ſymmetry.

Irregular BUILDING, that whoſe plan is not contained with equal or parallel lines, either by the accident of ſituation, or the deſign of the builder, and whoſe parts are not relative to one another in the elevation.

Inſulated BUILDING, that which is not contiguous to any other, but is encompaſſed with ſtreets, open ſquares, or the like.

Engaged BUILDING, one ſurrounded with other buildings, having no front to any ſtreet or public place, nor any communication without, but by a common paſſage.

Interred or ſunk BUILDING, one whoſe area is below the ſurface of the place on which it ſtands, and of which the loweſt courſes of ſtone are concealed.

With reſpect to their uſe, buildings take ſeveral denominations, as public buildings, private buildings, hydraulic buildings, *&c.* See BASILIC, CHURCH, PALACE, HOUSE, FOUNTAIN, *&c.*

BUILDING is alſo uſed for the art of conſtructing and raiſing an edifice; in which ſenſe it comprehends as well the expences, as the invention and execution of the deſign. There are three things chiefly to be conſidered in the art of building, *viz.* conveniency, firmneſs, and delight. To accompliſh which ends, Sir H. Wotton conſiders the ſubject under theſe two heads, the ſituation and the work. As to the ſituation, either that of the whole is to be conſidered, or that of its parts. In the firſt, regard muſt be had to the quality, temperature, and ſalubrity of the air; to the quality of the ſoil; to the conveniency of water, fuel, carriage, *&c.* and to the agreeableneſs of the proſpect. To which may be added, a political precept or caution, by no means to build too near a great neighbour; for in that caſe, ſays the above-mentioned celebrated architect, you would be as unfortunately ſeated on earth as Mercury is in the heavens, for the moſt part ever in combuſtion, or obſcurity, under brighter beams than his own. As to the ſituation of the parts, the chief rooms, ſtudies, and libraries, ſhould lie towards the eaſt; thoſe offices which require heat, as kitchens, brew-houſes, bake-houſes, and diſtillatories, towards the ſouth; thoſe which require a cool freſh air, as cellars, pantries, granaries, to the north; as alſo galleries for paintings, muſæums, *&c.* which require a ſteady light. The antient Greeks and Romans generally ſituated the fronts of their houſes towards the ſouth; but the modern Italians vary very much from this rule. And indeed, as to this matter, regard muſt ſtill be had to the country, each being obliged to provide againſt its own inconveniencies.

The ſituation being fixed on, the next thing to be conſidered is the work itſelf, under which come firſt the principal parts, and next, the acceſſories or ornaments. To the principals belong the materials, and the form or diſpoſition.

As for the materials, they are either ſtone, as marble, free-ſtone, brick for the walls, mortar, *&c.* or of wood, as fir, cypreſs, cedar for pillars of upright uſes, oak for ſummers, beams and crop-work, or for joining and connection. See the articles BRICK, MORTAR, SUMMER, BEAM, *&c.*

As to the form and diſpoſition of a building, it is either ſimple or mixed.

The ſimple forms are either circular, or angular.

The circular form is very commodious, and the moſt capacious of any, ſtrong, durable, and very beautiful; but is the moſt chargeable of all others, and much room is loſt by the bending of the walls, when it comes to be divided into apartments; beſides an ill diſtribution of the light, unleſs it be from the center of the roof. For theſe reaſons, the antients employed this form only in their temples and amphitheatres, which had no need of compartitions.

As for angular forms, building neither loves many nor few angles. The triangle is condemned above all others, as wanting both capaciouſneſs and firmneſs, as alſo on account of its not being reſolvable in the internal partitions, into any other figure than its own. Buildings with five, ſix, or more angles, are more fit for fortifications than civil edifices.

The

The rectangle, therefore, is generally choſen, as being a medium between the triangle and a pentagon, &c. But then authors are in diſpute, whether the rectangle ſhould be an exact ſquare, or an oblong; and Sir H. Wotton prefers the oblong, provided the length exceeds not the breadth by more than one third. As to mixed forms, partly circular, and partly angular, a judgment may be made of them, from what has been already ſaid of ſimple ones. Let the builder, however, remember not to loſe ſight of uniformity, while he is in purſuit of variety; for theſe two may be very well reconciled, as may be obſerved in our bodies, which are uniform in the whole configuration; and yet ſome of the members are round, others flat; ſome prominent, and others indented, or retired.

Some obſerve, that in building houſes long, the uſe of ſome rooms will be loſt; as they will take up more for entries and paſſages, and will require too much for doors; and if the building be a geometrical ſquare, the middle rooms will want light, in caſe the houſe be pretty large; and therefore they recommend the form of the letter H, a form, ſay they, in which the building ſtands firmer againſt the weather, and in which the offices may be remote from the parlour, and rooms of entertainment, and yet in the ſame houſe.

This figure may ſerve very well for a country gentleman's houſe.

The principal parts of a building, are comprized by Baptiſta Alberti, under five heads, *viz.* the foundation, the walls, the apertures, the compartitions, and the covering; the properties and uſes of which, may be ſeen under the articles FOUNDATION, WALL, ROOF, &c.

The acceſſories or ornaments of a building, are fetched from ſculpture and painting. In the firſt, care ought to be taken that there be not too much of it, eſpecially at the entrance; and that both in fine and coarſe pieces of ſculpture, and likewiſe in placing figures aloft, the rules of perſpective be ſtrictly obſerved.

In painting, the chief things to be regarded are, that the beſt pieces be placed in the beſt lights, and that they be ſuited to the intention of the rooms they are uſed in.

If we compare the modern with the old way of building in England, we cannot but wonder at the genius of thoſe times. Our fore-fathers were wont to dwell in houſes moſt of them with a blind ſtair-caſe, low ceilings, and dark windows; the rooms built at random, without any contrivance, and often with ſteps from one to another; whereas the genius of our times requires light ſtair-caſes, fine ſaſh-windows, and lofty ceilings, with conveniencies far ſuperior to thoſe that houſes in antient days afforded upon an equal quantity of ground.

The greateſt objection againſt our houſes, eſpecially in the city of London, is that they are too ſlight, on account of the fines exacted by the landlords; but then this manner of building is very much to the advantage of ſuch trades as have relation to builders; for they ſcarce ever want work in a city where they are always either repairing or rebuilding.

The following general rules to be obſerved in building, were eſtabliſhed by act of parliament, before the rebuilding of the city of London after the fire. 1. In every foundation within the ground, there muſt be added one brick in thickneſs, to the thickneſs of the wall next the foundation to be ſet off, in three courſes equally on both ſides. 2. No timber muſt be laid within twelve inches of the foreſide of the chimney jaumbs. 3. That all joiſts on the back of any chimney, be laid with a trimmer at ſix inches diſtance from the back. 4. That no timber be laid within the funnel of any chimney, upon penalty of ten ſhillings to the workman, and ten ſhillings every week it continues unreformed. 5. That no joiſts or rafters be laid at greater diſtances from one to the other, than twelve inches; and no quarters at a greater diſtance, than fourteen inches. 6. That no joiſts bear at longer length than nine feet. 7. That all roofs, window-frames, and cellar-floors, be made of oak. 8. That the tile-pins be made of oak. 9. That no ſummers or girders in brick-buildings, do lie over the heads of doors or windows. 10. That no ſummers or girders do lie leſs than ten inches into the brick-work; nor no joiſts leſs than eight inches, and that they be laid in loam.

Dr. Fuller gives us ſome good aphoriſms in building, as, 1. Let not the common rooms be ſeveral, nor the ſeveral rooms common; that is, the common rooms are not to be private or retired, as the hall, galleries, &c. which are to be open; and the chambers, cloſets, &c. to be retired. 2. As to capaciouſneſs, a houſe had better be too little for a day, than too big

for

for a year, and therefore to be proportioned to ordinary not extraordinary occaſions. 3. As for ſtrength, country houſes muſt be ſubſtantives, able to ſtand of themſelves; not like city buildings, ſupported and flanked by thoſe of their neighbour on each ſide. 4. As for beauty, let not the front look aſquint a ſtranger, but accoſt him right at his entrance. 5. Let the offices keep their due diſtance from the manſion-houſe; thoſe are too familiar which preſume to be of the ſame pile with it.

Section of a BUILDING. See SECTION.

BUL, in the antient hebrew chronology, the eighth month of the eccleſiaſtical, and the ſecond of the civil year; it has ſince been called Marſhevan, and anſwers to our October.

BULAC, a town of Egypt, ſituated on the eaſtern ſhore of the river Nile, about two miles weſt of Grand Cairo, of which it is the port-town, and contains about four thouſand families; eaſt long. 32°, and north latitude 30°.

It is a place of great trade, as all the veſſels, going up and down the Nile, make ſome ſtay here: it is alſo in this place that they cut the banks of the Nile every year, in order to fill their canals, and overflow the neighbouring grounds, without which the ſoil would produce neither grain nor herbage.

BULAFO, a muſical inſtrument conſiſting of ſeveral pipes of wood, tied together with thongs of leather ſo as to form a ſmall interſtice between each pipe. It is uſed by the negroes of Guinea.

BULB, or BULBOUS ROOT, in the anatomy of plants, expreſſes a root of a round or roundiſh figure, and uſually furniſhed with fibres at its baſe.

Bulbous roots are ſaid to be ſolid, when compoſed of one uniform lump of matter; tunicated, when formed of multitudes of coats, ſurrounding one another; ſquamoſe, when compoſed of, or covered with leſſer flakes; duplicate, when there are only two to each plant; and agaregate, when there is a congeries of ſuch roots to each plant.

BULBOCODIUM, in botany, a genus of the hexandria-monogynia claſs of plants, the flower of which conſiſts of ſix petals of a funnel-form; the fruit is a triangular acuminated capſule, with three cells, containing numerous ſeeds. The root of this plant, according to Lemery, is purgative and aperitive; but Ray ſays it is emetic, and hurtful to the nerves. Mr. Herman ſays, the bruiſed leaves are good for an eryſipelas.

BULBOSE, or BULBOUS. See the article BULB.

BULGAR, the capital of the province of Bulgar, in Ruſſia, ſituated on the river Wolga; eaſt longitude 51°, and north lat. 54°.

BULGARIA, a province of Turky in Europe, bounded by the river Danube, which divides it from Wallachia and Moldavia on the north; by the Black ſea, on the eaſt; by Romania, on the ſouth; and by Servia, on the weſt. Its chief city is Nicopolis.

BULIMY, a diſeaſe in which the patient is affected with an inſatiable and perpetual deſire of eating; and, unleſs he is indulged, he often falls into fainting fits. It is alſo called *fames canina*, canine appetite.

It muſt be obſerved, however, that ſome make a diſtinction between bulimy and fames canina, namely, that in the fames canina the patient is taken with vomiting, as dogs are after eating a too great quantity of food; though ſome are ſeized with a flux of the belly inſtead of vomiting, nature diſcharging that way the ſuperfluity of aliment, which the ſtomach was incapable of digeſting; but that the bulimy is attended with a lipothymy, and not with vomiting.

A bulimy ariſes from a too contractile force of the muſcular coat of the ſtomach, or from very ſharp humours contained in it. In ſome, the right mouth of the ſtomach has been found too large, after death, and conſequently the aliment was expelled too ſoon.

As to the therapeutic part, in order to ſubdue the contractile force of the ſtomach, it is neceſſary to uſe oils and fat things, as fat meat, pork, hot bread and butter, likewiſe milk and lacticinia, eſpecially compoſitions of meal and milk, rice, millet, barley, buck-wheat, beans, peas, lentils, almonds, and the like; as alſo chocolate made with milk and ſweetened with ſugar. If theſe are inſufficient, opiates muſt be added, particularly a dram of theriaca in the evening.

If the bulimy proceeds from ſharp humours irritating the ſtomach, the moſt rational method of cure is to evacuate ſuch humour, or correct its acrimony, and then to reſtore the ſtomach, and the organs employed in digeſtion, to their natural tone and ſtate, that no more may be generated. Abſorbents may be added to

the former things; and if an acid is in fault, thirty or forty drops of oil of tartar per deliquium, will be proper, and alkalies in general, eſpecially filings of ſteel, taken in large doſes. Brandy taken in the morning, and frequent ſmoaking tobacco, have likewiſe proved beneficial to ſome.

BULITHUS, βωλιθος, a ſtone found either in the gall-bladder, or in the kidneys and bladder of an ox: hence appears the error of Ariſtotle, who pretended that man alone was afflicted with the ſtone.

BULK *of a ſhip*, the whole content in the hold for the ſtowage of goods.

BULK-HEADS are partitions made athwart the ſhip, with boards, by which one part is divided from the other; as the great cabbin, gun-room, bread-room, and ſeveral other diviſions. The bulk-head afore is the partition between the fore-caſtle and gratings in the head.

Breaking BULK. See BREAKING.

BULL, *taurus*, in zoology, the male of the ox-kind, which being caſtrated is called an ox. See the article BOS.

A bull, kept for breeding, ought to be gentle, of a middle age, of a black or red colour, and of a ſharp quick countenance; his fore-head ſhould be broad and curled, his hair ſmooth like velvet, his eyes black and large, his horns long, his neck fleſhy, his breaſts big, his back ſtrait and flat, his buttocks ſquare, his belly long and large, his legs ſtrait, and his joints ſhort. Such a bull is ſaid to produce ſound and ſtrong cattle, and eſpecially oxen fit for draught. One bull will ſerve fifty, ſome ſay ſixty cows; but then he muſt be young, or only two or three years old.

BULL, *taurus*, in aſtronomy. See the article TAURUS.

BULL-BAITING. See BAITING.

BULL's-EYE, in aſtronomy. See the article ALDEBARAN.

BULL's-EYE, among ſeamen, a ſmall, obſcure, ſublime cloud, ruddy in the middle, that ſometimes appears to mariners, and is the immediate forerunner of a great ſtorm at ſea.

BULL-FINCH, in ornithology, the engliſh name of the *loxia* with a black head and a red breaſt. It is about the ſize of the common ſparrow, and its wings are elegantly variegated with black and red. See plate XXXIII. fig. 3. and the article LOXIA.

BULL-FROG, in zoology, the largeſt kind of frog. See the article FROG.

BULL, among eccleſiaſtics, a written letter, diſpatched, by order of the pope, from the roman chancery, and ſealed with lead, being written on parchment, by which it is partly diſtinguiſhed from a brief. See the article BRIEF.

It is a kind of apoſtolical reſcript, or edict, and is chiefly in uſe in matters of juſtice or grace. If the former be the intention of the bull, the lead is hung by a hempen cord; if the latter, by a ſilken thread. It is this pendent lead, or ſeal, which is, properly ſpeaking, the bull, and which is impreſſed, on one ſide, with the heads of St. Peter and St. Paul, and on the other with the name of the pope, and the year of his pontificate. The bull is written in an old, round, gothic letter, and is divided into five parts, the narrative of the fact, the conception, the clauſe, the date, and the ſalutation, in which the pope ſtiles himſelf *ſervus ſervorum*, *i. e.* the ſervant of ſervants.

Theſe inſtruments, beſides the lead hanging to them, have a croſs, with ſome text of ſcripture, or religious motto, about it. Bulls are granted for the conſecration of biſhops, the promotion to benefices, and the celebration of jubilees, &c.

Bull in cœna Domini, a particular bull read every year, on the day of the Lord's ſupper, or Maundy Thurſday, in the pope's preſence, containing excommunications and anathemas againſt heretics, and all who diſturb or oppoſe the juriſdiction of the holy ſee. After the reading of the bull, the pope throws a burning torch in to the public place, to denote the thunder of this anathema.

Golden BULL, an edict, or imperial conſtitution, made by the emperor Charles IV. reputed to be the magna charta, or the fundamental law of the german empire. It is called golden, becauſe it has a golden ſeal, in the form of a pope's bull, tied with yellow and red cords of ſilk: upon one ſide is the emperor repreſented ſitting on his throne, and on the other the capitol of Rome. It is alſo called Caroline, on Charles IV's account. Till the publication of the golden bull, the form and ceremony of the election of an emperor were dubious and undetermined, and the number of the electors not fixed. This ſolemn edict regulated the functions, rights, privileges, and pre-eminences of the electors. The original, which is in latin, on vellum, is preſerved at Frankfort: this ordinance, containing thirty articles, or chapters, was approved of by



Fig. 1. BUCCINA.

Fig. 2. BUFFALO.



Fig. 3. BULL-FINCH.

D. Jeffreys sculp.



BRITISH MUSEUM

by all the princes of the empire, and remains ſtill in force.

BULLÆ, in roman antiquity, ornaments at firſt given only to the ſons of noblemen; though afterwards they became of more common uſe. This ornament was firſt given by Tarquinius with the prætexta to his ſon, who had, with his own hand, at fourteen years of age, killed an enemy. Thus we find the bulla was a ſign of triumph. Macrobius relates, that the children of freed men were allowed to wear the prætexta, and, inſtead of the golden bulla, a leathern one, about their necks: thoſe bullæ were made hollow within to incloſe amulets againſt envy, &c. When the youth arrived at fifteen years of age, they hung up their bullæ about the necks of their gods Lares. We are farther informed, that the bullæ were not only hung about the necks of young men, but of horſes alſo.

BULLET, an iron or leaden ball, or ſhot, wherewith fire arms are loaded. See the article BALL.

Bullets are of various kinds, *viz.* red-hot bullets, made hot in a forge, intended to ſet fire to places where combuſtible matters are found. Hollow bullets, or ſhells made cylindrical, with an aperture and fuſee at one end, which giving fire to the inſide, when in the ground, it burſts, and has the ſame effect with a mine.

Chain-bullets, which conſiſt of two balls, joined by a chain, three or four feet apart.

Branch-bullets, two balls joined by a bar of iron, five or ſix inches apart.

Two-headed bullets, called alſo angles, two halves of a bullet, joined by a bar or chain.

Cannon bullets are of different diameters and weight, according to the nature of the piece: an engliſh muſquet carries a bullet of ſixteen in a pound; a carbine, of twenty-four; and a piſtol of thirty-two in a pound; by which are to be underſtood ammunition carbines and piſtols.

According to Marſenne, a bullet, ſhot out of a great gun, flies 92 fathoms in a ſecond of time, being equal to 589 ½ engliſh feet: but, according to ſome very accurate experiments of Mr. Derham, it only flies, at its firſt diſcharge, 510 yards in five half ſeconds.

BULLION, uncoined gold or ſilver in the maſs.

Thoſe metals are called ſo, either when ſmelted from the native ore, and not perfectly refined; or when they are perfectly refined, but melted down in bars or ingots, or in any unwrought body, of any degree of fineneſs.

When gold and ſilver are in their purity, they are ſo ſoft and flexible, that they cannot well be brought into any faſhion for uſe, without being firſt reduced and hardened with an alloy of ſome other baſer metal.

To prevent theſe abuſes, which ſome might be tempted to commit in the making of ſuch alloys, the legiſlators of civilized countries have ordained, that there ſhall be no more than a certain proportion of a baſer metal to a particular quantity of pure gold or ſilver, in order to make them of the fineneſs of what is called the ſtandard gold or ſilver of ſuch a country.

According to the laws of England, all ſorts of wrought plate in general, ought to be made to the legal ſtandard; and the price of our ſtandard gold and ſilver is the common rule whereby to ſet a value on their bullion, whether the ſame be in ingots, bars, duſt, or in foreign ſpecie: whence it is eaſy to conceive that the value of bullion cannot be exactly known, without being firſt aſſayed, that the exact quantity of pure metal therein contained may be determined, and conſequently whether it be above or below the ſtandard.

Silver and gold, whether coined or uncoined (though uſed for a common meaſure of other things) are no leſs a commodity, than wine, tobacco, or cloth; and may, in many caſes, be exported as much to the national advantage as any other commodity.

BULLOCK, the ſame with an ox, or gelded bull. See the article BULL.

BULWARK, in the antient fortification, the ſame with rampart. See RAMPART.

BUMICILLI, a religious ſect of mahometans in Egypt and Barbary, who pretend to fight with devils, and commonly appear in a fright and covered with wounds and bruiſes. About the full moon they counterfeit a combat in the preſence of all the people, which laſts for two or three hours, and is performed with aſſagaias, or javelins, till they fall down quite ſpent; in a little time however, they recover their ſpirits, get up, and walk away.

BUNCH, in a general ſenſe, denotes a cluſter of certain things, as of grapes.

BUNCH is alſo uſed for a tumour or excreſcence; ſuch is that which grows on the backs of camels.

BUNCHED CODS, or PODS, thoſe that ſtand out in knobs, wherein the ſeeds are lodged.

BUNCHED ROOTS, all ſuch as have knobs or knots on them.

BUNG, denotes the plug, or ſtopple, fited to the opening of a caſk, called the bung-hole.

After tunning any fermented liquor, it is proper to leave the bung-hole open for ſometime, otherwiſe the veſſel would be in danger of burſting.

BUNGAY, a market-town of Suffolk, ſituated on the river Wavenny, about thirty-two miles north-eaſt of Bury: eaſt lon. 1° 35′, and north latitude 52° 35′.

BUNIAS, CORN ROCKET, in botany, a genus of the tetradynamia-ſiliquoſa claſs of plants, the flower of which conſiſts of four petals in form of a croſs; the fruit is an irregular pod with four ſides, and terminated in ſharp points, containing a roundiſh ſeed under each point. Theſe ſeeds are ſaid to be heating, drying, abſterging, aperitive, and digeſtive, and to be enemies to venery.

BUNIUM, the EARTH-NUT, in botany, a genus of plants belonging to the pentandria digynia claſs, the general flower of which is uniform, and the ſingle flower conſiſts of five inflexo-cordated equal petals: there is no pericarpium: the fruit is oval, and diviſible into two parts; the ſeeds are two, and oval, convex on one ſide, and plane on the other.

BUNT *of a ſail*, the middle part of it, formed deſignedly into a bag or cavity, that the ſail may gather more wind. It is uſed moſtly in top-ſails, becauſe courſes are generally cut ſquare, or with but ſmall allowance for bunt or compaſs. The bunt holds much leeward wind, that is, it hangs much to leeward.

BUNT LINES are ſmall lines made faſt to the bottom of the ſails, in the middle part of the bolt rope, to a cringle, and ſo are reeved through a ſmall block, ſeized to the yard. Their uſe is to trice up the bunt of the ſail, for the better furling it up.

BUNTING, in ornithology, the engliſh name of the *emberiza*, a ſpecies of the *fringilla*. Its head ſomewhat reſembles that of a rail; the chin, breaſt, and belly are of a yellowiſh white; the throat hath oblong black ſpots: the tail is more than three inches long, and of a duſky red colour: it ſings ſitting upon the higheſt twigs of trees and ſhrubs. See plate XXXIV. fig. 1. and the article EMBERIZA.

BUNTINGFORD, a market-town of Hertfordſhire, about twelve miles north of Hertford; weſt long. 5′, and north lat. 51° 55′.

BUNTZLAU, or BUNTZEL, the name of two towns in Germany: the old town is ſituated on the river Elbe, and new town, which is become the moſt conſiderable, upon the Gizare, eight leagues from Lignitz, in 16° 26′ eaſt longitude, and 51° 12′ north latitude. There is likewiſe a town of that name in Sileſia.

BUONO, as TEMPO BUONO, in muſic, ſignifies a certain time or part of the meaſure, more proper for certain things than any other, as to end a cadence or pauſe, to place a long ſyllable or ſyncoped diſſonance, concord, &c. In common time of four times to a bar, the firſt and third is one buono tempo, as the ſecond and laſt are called tempo di cattiva.

BUOY, at ſea, a ſhort piece of wood, or a cloſe-hooped barrel, faſtened ſo as to float directly over the anchor, that the men, who go in the boat to weigh the anchor, may know where it lies.

BUOY is alſo a piece of wood, or cork, ſometimes an empty caſk, well cloſed, ſwimming on the ſurface of the water, and faſtened, by a chain or cord, to a large ſtone, piece of broken cannon, or the like, ſerving to mark the dangerous places near a coaſt, as rocks, ſhoals, wrecks of veſſels, anchors, &c.

There are ſometimes, inſtead of buoys, pieces of wood placed in form of maſts, in conſpicuous places; and ſometimes large trees are planted in a particular manner, in number two at leaſt, to be taken in a right line, the one hiding the other, ſo as the two may appear to the eye no more than one.

Stream the BUOY is to let the anchor fall while the ſhip has way.

To BUOY *up the cable* is to faſten ſome pieces of wood, barrels, &c. to the cable, near the anchor, that the cable may not touch the ground, in caſe it be foul or rocky, leſt it ſhould be fretted and cut off.

BUOYANT, ſomething which, by its aptneſs to float, bears up other more ponderous and weighty things. See BUOY.

BUPHTHALMUM, OX-EYE, in botany, a genus of the ſyngeneſia-polygamia-ſuperflua claſs of plants of Linnæus, comprehending the *aſteriſcus* and *aſteroides* of Tourne-

Tournefort: the compound flower is large, radiated, and reddiſh on the back-ſide, but white within: the ſeeds are ſolitary, with the ſides thereof emarginated, and contained in the cup: the proper hermaphrodite flower is infundibuliform, patulous, and divided into five ſegments at the limb. See plate XXXIV. fig. 2.

BUPLEURUM, HARE'S-EAR, in botany, a genus of the pentandria-digynia claſs of plants, the general flower of which is uniform; the proper one conſiſts of five ſmall cordated petals, bent inwardly: the fruit is round, compreſſed, ſtriated, diviſible into two cells, containing ovato-oblong ſtriated ſeeds, convex on the one ſide, and plane on the other.

BUQUOI, a town of Artois, in the french Netherlands, ſituated on the confines of Picardy; eaſt longitude 2° 40′, and north latitude 50° 12′.

BURDEN, or BURDON, in muſic, the drone or baſs, and the pipe or ſtring which plays it: hence that part of a ſong, that is repeated at the end of every ſtanza, is called the burden of it.

A cord which is to be divided, to perform the intervals of muſic, when open and undivided, is alſo called the burden.

BURDEN *of a ſhip* is its contents, or number of tons it will carry. The burden of a ſhip may be determined thus: multiply the length of the keel, taken within board, by the breadth of the ſhip, within board, taken from the midſhip-beam, from plank to plank, and multiply the product by the depth of the hold, taken from the plank below the keelſon, to the under part of the upper-deck plank, and divide the laſt product by 94, then the quotient is the content of the tonnage required. See the article FREIGHT.

BURDOCK, in botany, the engliſh name of two diſtinct genera of plants, the arctium and xanthium. See the articles ARCTIUM and XANTHIUM.

BUREN, a town of dutch Guelderland, about ſixteen miles weſt of Nimeguen: eaſt lon. 5° 20′, and north lat. 52°.

BUREN is alſo the name of a town of Weſtphalia, in Germany, about five miles ſouth of the city of Paderborn; eaſt lon. 8° 25′, and north latitude 51° 35′.

BURFORD, a market-town of Oxfordſhire, about fifteen miles weſt of Oxford; weſt lon. 1° 40′, and north lat. 51° 40′. It gives the title of earl to the noble family of Beauclerc.

BURG, a town of Zutphen, in the dutch Netherlands, ſituated upon the old Iſſel, about eighteen miles eaſt of Nimeguen; eaſt lon. 6° 10′, and north lat. 52°.

BURGAGE, an antient tenure in boroughs, whereby the inhabitants, by cuſtom, hold their lands, &c. of the king, or other ſuperior lord of the borough, at a certain yearly rent: alſo a dwelling houſe in a borough, was antiently called a burgage.

BURGESS, an inhabitant of a borough, or one who poſſeſſes a tenement therein.

In other countries, burgeſs and citizen are confounded together; but with us they are diſtinguiſhed: the word is alſo applied to the magiſtrates of ſome towns.

Burgeſs is now ordinarily uſed for the repreſentative of a borough-town in parliament.

BURGGRAVE properly denotes the hereditary governor of a caſtle or fortified town, chiefly in Germany.

BURGH, a term denoting the ſame with borough. See the article BOROUGH.

BURGH-BOTE ſignifies a contribution towards the building or repairing of caſtles, or walls, for the defence of a borough, or city.

BURGH-BRECHE is properly the breaking open a burgh, houſe, encloſure, &c. and in the laws of Canute, cap. lv. ſignifies a fine, impoſed upon a community of a town, for a breach of the peace. According to Raſtallus, burgh-breche is, to be quit of treſpaſſes committed againſt the peace, in city or borough.

BURGHERMESTERS, the ſame with burgomaſters. See BURGOMASTER.

BURGHMOTE, the court of a borough.

BURGLARY, a felonious breaking and entering into the dwelling-houſe of another perſon, in the night-time, with an intent to commit ſome felony, whether the ſame be executed, or not.

The like offence committed by day, is called houſe-breaking.

Burglary is an offence excluded the benefit of clergy, and may be committed by taking away goods from a dwelling-houſe, any perſon being therein; or breaking any ſhop, ware-houſe, &c. tho' in the day-time, and taking goods from thence of five ſhillings value, if no perſon be therein.

BURGLES, a town of Tranſilvania, about thirty miles north of Clauſenburg, ſubject to the houſe of Auſtria; eaſt long. 22° 40′, and north latitude 47° 40′.

BURGOMASTER, the chief magiſtrate of the great towns in Flanders, Holland, and Germany. The power and juriſdiction

diction of the burgomaſter is not the ſame in all places, every town having its particular cuſtoms and regulations: at Amſterdam there are four choſen by the voices of all thoſe people in the ſenate, who have either been burgomaſters or echevins. Their authority reſembles that of our lord-mayor and aldermen; they diſpoſe of all under offices, that fall in their time, keep the key of the bank, and enjoy a ſalary but of five hundred guilders, all feaſts, public entertainments, &c. being defrayed out of the common treaſury.

BURGOO, a diſh frequent at ſea, being made of oat-meal, or greets, boiled in water till they burſt, and then ſome butter added.

BURGOS, the capital of old Caſtile, in Spain, about one hundred and ten miles north of Madrid; weſt longitude 4° 5′, and north lat. 42° 30′.

BURGOW, a town of Swabia, in Germany, about twenty miles weſt of Augſburg; eaſt long. 10° 20′, and north lat. 48° 30′.

BURGRAVE, or BURGGRAVE. See the article BURGGRAVE.

BURGUNDY, or BURGOIGNE, a province, or government, in France, having Champaign on the north, and Dauphine on the ſouth.

BURIAL, the interment of a deceaſed perſon.

The rites of burial make the greateſt and moſt neceſſary care, being looked upon in all countries, and at all times, as a debt ſo ſacred, that ſuch as neglected to diſcharge it were thought accurſed: hence the Romans called them *juſta*, and the Greeks νομιμα, δικαια, ὁσια, &c. words implying the inviolable obligations which nature has laid upon the living, to take care of the obſequies of the dead. Nor are we to wonder that the antient Greeks and Romans were extremely ſolicitous about the interment of their deceaſed friends, ſince they were ſtrongly perſuaded, that their ſouls could not be admitted into the elyſian fields till their bodies were committed to the earth; and if it happened that they never obtained the rites of burial, they were excluded from the happy manſions, for the term of an hundred years. For this reaſon it was conſidered as a duty incumbent upon all travellers who ſhould meet with a dead body in their way, to caſt duſt or mould upon it three times, and of theſe three handfuls, one at leaſt was caſt upon the head. The antients likewiſe conſidered it as a great misfortune if they were not laid in the ſepulchres of their fathers; for which reaſon, ſuch as died in foreign countries had uſually their aſhes brought home, and interred with thoſe of their anceſtors. But notwithſtanding their great care in the burial of the dead, there were ſome perſons whom they thought unworthy of that laſt office, and to whom therefore they refuſed it: ſuch were 1. Public or private enemies. 2. Such as betrayed, or conſpired againſt their country. 3. Tyrants, who were always looked upon as enemies to their country. 4. Villains guilty of ſacrilege. 5. Such as died in debt, whoſe bodies belonged to their creditors. And, 6. Some particular offenders, who ſuffered capital puniſhment.

Of thoſe who were allowed the rites of burial, ſome were diſtinguiſhed by particular circumſtances of diſgrace attending their interment: thus perſons killed by lightening were buried apart by themſelves, being thought odious to the gods; thoſe who waſted their patrimony, forfeited the right of being buried in the ſepulchres of their fathers; and thoſe who were guilty of ſelf-murder were privately depoſited in the ground, without the accuſtomed ſolemnities. Among the Jews, the privilege of burial was denied only to ſelf-murderers, who were thrown out to rot upon the ground. In the chriſtian church, though good men always deſired the privilege of interment, yet they were not, like the heathens, ſo concerned for their bodies, as to think it any detriment to them, if either the barbarity of an enemy, or ſome other accident, deprived them of this privilege. The primitive chriſtian church denied the more ſolemn rites of burial only to unbaptiſed perſons, ſelf-murderers, and excommunicated perſons who continued obſtinate and impenitent, in a manifeſt contempt of the church's cenſures.

The place of burial among the Jews was never particularly determined. We find they had graves in the town and country, upon the highways, in gardens, and upon mountains. Among the Greeks, the temples were made repoſitories for the dead in the primitive ages, yet the general cuſtom in later ages, with them, as well as with the Romans and other heathen nations, was to bury their dead without their cities, and chiefly by the highways. Among the primitive chriſtians, burying in cities was not allowed

for the first three hundred years, nor in churches for many ages after, the dead bodies being first deposited in the atrium or church-yard, and porches and porticos of the church: hereditary burying-places were forbidden till the twelfth century. As to the time of burial, with all the ceremonies accompanying it, see the article FUNERAL RITES, FUNERAL GAMES, &c.

BURICK, a town of the dutchy of Cleves, in the circle of Westphalia, in Germany, situated on the river Rhine, about twenty miles south of Cleves; east long. 6° 5′, and north latitude 51° 35′.

BURLESQUE, a jocose kind of poetry, chiefly used in the way of drollery and ridicule, to deride persons and things.

F. Vavassor maintains, in his book De ludicra dictione, that burlesque was altogether unknown to the antients: but others are of a different opinion. We even find that one Raintovius, in the time of Ptolemy Lagus, turned the serious subject of tragedy into ridicule; which is perhaps a better plea for the antiquity of farce, than of burlesque.

The Italians seem to have the justest claim to the invention of burlesque: the first of this kind was Bernia; who was followed by Lalli, Caporali, &c. From Italy it passed into France, and became there so much the mode, that, in 1649, there appeared a book under the title of The Passion of our Saviour, in burlesque verse. From thence it passed into England, where some have excelled therein.

BURLINGTON, a sea port town, in the east riding of Yorkshire, situated on the german ocean, about thirty-seven miles north-east of York; east long. 10′, and north latitude 54° 15′.

It gave the title of earl to a branch of the noble family of Boyle.

New BURLINGTON, the capital of New-Jersey, in North America; situated in an island of Delawar river, about twenty miles north of Philadelphia; west long. 74°, and north lat. 40° 40′.

BURMANNIA, in botany, a genus of the hexandria-monogynia class of plants, the flower of which is very small, consisting of three very small, ovated, oblong petals, situated at the mouth of the cup: the fruit is an involuted capsule of a cylindraceo-trigonal figure, formed of three valves, with three cells, containing numerous very small seeds.

BURN, in medicine and surgery, an injury received in any part of the body, either by fire itself, or by instruments put in a violent heat by the fire.

When any thing of this nature is applied to the body, the fibres and small vessels of the parts that are touched by it, will instantly corrugate and burst, whilst the blood and other contained fluids will be extravasated, stagnate, and corrupt: but as the burns caused by solid bodies, are always attended with more grievous consequences, than those which are occasioned with boiling liquors, so the mischief is universally proportioned to the degree of vehemence in the burn: we may therefore divide burns into four degrees; the first and slightest is that which occasions heat, pain, and a small vesication of the injured part, in a short time. The second degree is, when the part is instantly affected with great pain and vesication. The third is when the common integuments and subjacent flesh are so burnt, that they form a crust. The fourth is, where every thing is destroyed quite down to the bone. The third degree resembles a gangrene, and the fourth a sphacelus: whence it follows, that burns very much resemble inflammations, and are known, in their respective degrees, by nearly the same signs.

As a burn is not unlike an inflammation, in regard to degrees, so the method of cure in both is much the same. When there happens a slight burn, or one of the first degree, the most proper medicines, on all accounts, are resolvents, of which there are two kinds principally to be observed, the astringent and the emollient. Mild astringents are spirit of wine rectified, or camphorated: let the part affected be immerged in this spirit, and carefully fomented with linen cloths wet therein. Emollients are of linseed, or sweet almonds, of olives, of white lilies, of henbane, &c. with these the part affected should be frequently anointed. The vulgar method of applying the burnt part to a candle, or the fire, and keeping it in that position as long as you can bear it, repeating this process till all sort of heat and pain is removed, is frequently attended with success. The injured part may be fomented with water, as hot as the patient can bear it, till the pain and heat entirely disappear.

When the burn is of the second degree, which is attended with a blister, it seems improper to open the vesicle, or cut the skin already lacerated; but the best method, in this case, is, with all the haste possible,

poſſible, to apply one or other of the medicines preſcribed in the firſt degree, and renewing it very frequently: if the pain continues, lenitive remedies are to be uſed; here the moſt eligible medicines are the linſeed oil, Mynſicht's ointment, unguentum nutritum, &c. with theſe the part muſt be often anointed; or they muſt be ſpread on linen, and bound to the part affected: as the pain and heat gradually decreaſe, ſome plaſter, as that of red lead, may be applied, in order to ſmooth and reſtore the ſkin. If this ſecond degree be more intenſe than ordinary, and affects a great part of the body, it will be neceſſary forthwith to take away ſome blood, in proportion to the violence of the burn, even till the patient faints, in order to prevent exulcerations, deformities by ſeams, and perhaps a gangrene: after which a ſtrong cathartic ſhould be uſed.

As to the third degree, in which a cruſt immediately covers the burnt part, it is very difficult, if not abſolutely impoſſible, to cure it, without a ſuppuration. When this happens in the face, all diligence ſhould be uſed to prevent deformity, which may be occaſioned by a large cicatrix; therefore, in this caſe, the uſe of all plaſters and ointments whatſoever is to be avoided: but you cannot be too ſolicitous in forwarding the caſting off of the eſchar, or cruſt, and the evacuation of the matter that is concealed under it; yet it ſhould not be torn away with the knife, nor ſeparated with the hands: the eaſieſt and moſt ſucceſsful method is, by the uſe of emollients, ſuch as have been mentioned already, applied warm, and repeated till the hard cruſts ſeparate from the live fleſh; the part ſhould be dreſſed two or three times a day, and at each dreſſing, if you ſhould obſerve any portion of the cruſt tending to a ſeparation from the reſt, it ſhould be removed with the forceps, and the remaining cruſt anointed with butter, at the ſame time being never neglectful of the uſe of fomentations. The cruſt being taken off, the wound muſt be cleanſed and healed, the firſt of which offices may be executed by any mild digeſtive ointment, mixed up with mel roſarum: the medicines uſed for healing, are principally unguentum diapompholygos, vel de lithargyrio, &c. but if any portion of the eſchar is left under theſe ointments and plaſters, a danger follows of making a deformed cicatrix, from the conſtruction of the neighbouring parts, and from the acrimony of the confined ſanies. Evacuations by bleeding and purging are always to be premiſed, and proper regulations, with regard to diet, muſt be complied with: the beſt method of encouraging the renovation of the ſkin, is by frequently holding the burnt part over the ſteam that riſes from boiling water. But as to the fourth degree, which is always attended with extreme danger, where the burning has penetrated to ſuch a depth, as to corrupt and mortify all before it, almoſt to the very bone, all remedies are vain and uſeleſs, and there is no other way of aſſiſting the patient, but by cutting off the affected limb, as is done in a ſphacelus.

BURNET, in botany, the engliſh name of the ſanguiſorba of botanical writers. See the article SANGUISORBA.

BURNET-SAXIFRAGE, or PIMPERNEL-SAXIFRAGE, Pimpinella. See the article PIMPINELLA.

BURNHAM, a market-town of Norfolk, about twenty-five miles north weſt of Norwich; eaſt long. 50', and north lat. 53°.

BURNING, the action of fire on ſome *pabulum*, or fuel, by which the minute parts thereof are torn from each other, put into a violent motion, and ſome of them aſſuming the nature of fire themſelves, fly off *in orbem*, while the reſt are diſſipated in form of vapour, or reduced to aſhes. See the articles FIRE, VAPOUR, &c.

BURNING, or BRENNING, in our old cuſtoms, denotes an infectious diſeaſe, got in the ſtews by converſing with lewd women, and ſuppoſed to be the ſame with what we now call the venereal diſeaſe.

In a manuſcript of the vocation of John Bale, to the biſhopric of Oſſory, written by himſelf, he ſpeaks of Dr. Hugh Weſton, who was dean of Windſor, in 1556, but deprived by cardinal Pole for adultery, thus: "At this day is leacherous "Weſton, who is more practiſed in the "arts of breech-burning, than all the "whores of the ſtews. He not long ago "brent a beggar of St. Botolph's pa-"riſh." See the article STEWS.

BURNING, in antiquity, a way of diſpoſing of the dead, much practiſed by the antient Greeks and Romans, and ſtill retained by ſeveral nations in both the Eaſt and Weſt-Indies.

Euſtathius aſſigns two reaſons why burning came to be of ſo general uſe in Greece; the firſt is, becauſe bodies were thought to be unclean after the ſoul's departure, and

and therefore were purified with fire. The ſecond reaſon is, that the ſoul being ſeparated from the groſs and unactive matter, might be at liberty to take its flight into heaven. The body was rarely burnt without company, for beſides the various animals they threw upon the pile, we ſeldom find a man of quality conſumed without a number of ſlaves and captives, which, in barbarous times, they uſed to murder for that purpoſe: and in ſome parts of the Eaſt-Indies it is cuſtomary, at this day, for wives to throw themſelves into the funeral pile with their deceaſed huſbands. At the funerals of emperors, generals, &c. who had their arms burnt with them, the ſoldiers made proceſſion three times round the funeral pile with ſhouts and trumpets, to expreſs their reſpect to the dead. During the burning alſo, the dead perſon's friends ſtood by, called on the deceaſed, and poured out libations of wine, with which, when the pile was burnt down, they extinguiſhed the remains of the fire; and having collected the bones of the deceaſed, waſhed them with wine, and anointed them with oil. When the bones were diſcovered, they gathered the aſhes that lay cloſe to them, and both were repoſited in urns, either of wood, ſtone, earth, ſilver, or gold, according to the quality of the deceaſed. See URN.

BURNING, among ſurgeons, denotes the ſame with cauterization. See the article CAUTERIZATION.

Burning is much practiſed by the people of the Eaſt-Indies, particularly thoſe of Japan, who uſe the moxa for this purpoſe. See the article MOXA.

BURNING is alſo an appellation given to ſeveral diſeaſes, on account of the great heat with which they are attended: thus we ſay, a burning fever, &c. See the articles FEVER and CAUSUS.

BURNING-ALIVE, in roman antiquity, a puniſhment inflicted upon ſuch as deſerted to the enemy, or divulged the ſecrets of the public, coiners of falſe money, incendiaries; and chriſtians under Nero, were likewiſe burnt alive.

BURNING-GLASS, a convex or concave glaſs, commonly ſpherical, which being expoſed directly to the ſun, collects all the rays falling thereon into a very ſmall ſpace, called the focus; where wood, or any other combuſtible matter being put, will be ſet on fire.

The convex burning-glaſſes, tranſmit the rays of light, and in their paſſage, refract or incline them towards the axis; having the property of lenſes, and acting according to the laws of refraction.

The concave burning-glaſſes, very improperly ſo called, being uſually made of metal, reflect the rays of light, and in that reflection incline them to a point in their axis; having the property of mirrours, and acting according to the laws of reflection. See LENS, REFRACTION, MIRROUR, REFLECTION.

In order to account for the nature of burning-glaſſes, whether mirrours or lenſes, we muſt conſider the area of their ſurfaces, and the focal diſtance, becauſe both theſe quantities enter into the expreſſion of their power of burning. Let AB and IK (plate XXXIV. fig. 3.) be two mirrours expoſed directly to the rays of the ſun CD, EF, and LM, NO; then will all the rays falling on the ſurface of theſe mirrours be reflected to the focus of the glaſſes, where they will be concentered, not in a point of ſpace, but into a ſmall round circular area GH and PQ. Now this circular ſpot, is the image of the ſun inverted in both glaſſes; and the angle under which the image of an object appears from the center of the glaſs R and S, is equal to the angle under which the object appears. Therefore the angle GRH, is equal to the angle PSQ; and conſequently the cones GRH and PSQ are ſimilar, and the areas of their baſe, GH and PQ, will be as the ſquares of their heights, RH and SQ; that is, as the ſquares of their focal diſtances directly. Let A = area or ſurface of the large glaſs; a = that of the leſſer; F and f the focal diſtances, and P and p the power of burning in each. Then ſince, while the focal diſtance remains, the power of burning (P) will be as the denſity of the rays in the ſolar ſpot GH; and this denſity of the rays will be as the number of rays reflected thither by the glaſs, which number of rays will be as the ſurface of the mirrour A; therefore, P will be as A directly in a mirrour of the ſame concavity, that is $P : p :: A : a$. Again, if the area of each glaſs be the ſame, the ſame quantity of rays will be collected and converged to the focus's GH and PQ; and conſequently the denſity of thoſe rays will be greater, the leſs the ſpot is in which they are contained; conſequently, the power of burning (P) in this caſe, is inverſely as the area of the ſolar ſpot, or the focal diſtance; that is,

P will be as $\frac{1}{F^2}$; or $P : p :: \frac{1}{f^2} : \frac{1}{F^2} :: f^2 : F^2$. Consequently, when neither the area of the glaſs nor focal diſtance are given, we have the power of burning compounded of the direct ratio of the area, and inverſe ratio of the ſquare of the focal diſtance of the glaſs; or we have $P : p :: Af^2 : AF^2$. See the article FOCUS.

We have ſome extraordinary inſtances and ſurprizing accounts of the prodigious effects of burning-glaſſes. Thoſe made of reflecting mirrours, are more powerful than thoſe made with lenſes (*cæteris paribus*) becauſe the rays from a mirrour, are reflected all to one point nearly; whereas by a lens, they are refracted to different points, and are therefore not ſo denſe or ardent. The whiter alſo the metal or ſubſtance is, of which the mirrour is made, the ſtronger will be the effect; and it is obſervable, that the great Mr. Boyle having made a very large mirrour of black marble, it would not ſo much as ſet wood on fire, though expoſed a long time in the focus.

The moſt remarkable burning-glaſſes, or rather mirrours, among the antients, were thoſe of Archimedes and Proclus; by the firſt of which the roman ſhips, beſieging Syracuſe, according to the teſtimony of ſeveral writers, and by the other, the navy of Vitalian beſieging Byzantium, were reduced to aſhes. Among the moderns, the burning mirrours of greateſt eminence, are thoſe of Settala, of Villette, and Tſchernhauſen, and the new complex one of Mr. de Buffon.

That of Mr. de Villette, was three feet eleven inches in diameter, and its focal diſtance was three feet two inches. Its ſubſtance is a compoſition of tin, copper, and tin-glaſs. Some of its effects, as found by Dr. Harris and Dr. Deſaguliers, are, that a ſilver ſixpence, melted in $7\frac{1}{2}''$; a king George's halfpenny melted in $16''$, and ran in $34''$; tin melted in $3''$, and a diamond weighing 4 grains, loſt $\frac{1}{8}$ of its weight.

That of Mr. de Buffon is a polyhedron, ſix feet broad, and as many high, conſiſting of 168 ſmall mirrours, or flat pieces of looking-glaſs, each ſix inches ſquare; by means of which, with the faint rays of the ſun in the month of March, he ſet on fire boards of beech wood at 150 feet diſtance. Beſides, his machine has the conveniency of burning downwards, or horizontally, as one pleaſes; each ſpeculum being moveable, ſo as, by the means of three ſcrews, to be ſet to a proper inclination for directing the rays towards any given point; and it turns either in its greater focus, or in any nearer interval, which our common burning-glaſſes cannot do, their focus being fixed and determined.

Mr. de Buffon, at another time, burnt wood at the diſtance of 200 feet. He alſo melted tin and lead, at the diſtance of above 120 feet, and ſilver at 50.

Thoſe who are curious to have a deſcription of that of M. Tſchernhauſen, with an account of its powers, may conſult the hiſtory of the academy of ſciences, ann. 1699.

BURNING-MOUNTAINS, the ſame with volcanos. See the article VOLCANO.

BURNING *of colours*, among painters. There are ſeveral colours that require burning, as firſt, lamp-black, which is a colour of ſo greaſy a nature, that except it is burnt, it will require a long time to dry.

The method of burning, or rather drying, lamp-black, is as follows: put it into a crucible over a clear fire, letting it remain till it be red hot, or ſo near it, that there is no manner of ſmoke ariſes from it.

Secondly, umber, which if it be intended for colour for an horſe, or to be a ſhadow for gold, then burning fits it for both theſe purpoſes.

In order to burn umber, you muſt put it into the naked fire, in large lumps, and not take it out till it is thoroughly red hot; if you have a mind to be more curious, put it into a crucible, and keep it over the fire till it be red hot.

Ivory alſo muſt be burnt to make black, thus: fill two crucibles with ſhavings of ivory, then clap their two mouths together, and bind them faſt with an iron wire, and lute the joints cloſe with clay, ſalt, and horſe-dung, well beaten together; then ſet it over the fire, covering it all over with coals: let it remain in the fire, till you are ſure that the matter incloſed is thoroughly red hot: then take it out of the fire; but do not open the crucibles till they are perfectly cold; for were they opened while hot, the matter would turn to aſhes; and ſo it will be, if the joints are not luted cloſe.

BURNING *of land*, for corn. This art, uſually called denſhiring, or burnbeating,

is

is not applicable or neceſſary to all ſorts of lands, but that which is barren, ſour, heathy, and ruſhy; be it either hot or cold, wet or dry: inſomuch, that moſt of them will yield, in two or three years after ſuch burning, more above charges, than the inheritance was worth before. The common method for it is with a breaſt-plough to pare off the turf, turning it over, as it is cut, that it may dry the better, which in a hot ſeaſon is not neceſſary. When the turfs are dry, they muſt be laid in ſmall heaps, about two wheel-barrow loads together: if the turf does not burn without any additional fuel, the heap ſhould be raiſed on a ſmall bundle of ling, goſs, fern, or the like, that it may ſet the whole on fire: when they are reduced to aſhes, they ſhould lie till they are ſodden with rain, before they are ſpread. Care muſt be taken that the turf be not over burnt; for if it be reduced to white aſhes, the nitrous ſalt will be waſted.

The ground under hills muſt be pared ſomewhat lower than the ſurface of the earth, to abate the too abundant fertility cauſed by the fire there: the land ſhould be ploughed ſhallow only, and not above half the uſual quantity of ſeed ſown, which alſo ſhould be late of the year; if wheat, towards the end of October, to prevent the exceſſive rankneſs of the corn.

BURNISHER, a round, poliſhed piece of ſteel, ſerving to ſmooth and give a luſtre to metals.

Of theſe there are different kinds of different figures, ſtrait, crooked, &c. Half burniſhers are uſed to ſolder ſilver, as well as to give a luſtre. See the articles POLISHER and SOLDERING.

BURNISHING, the art of ſmoothing or poliſhing a metalline body, by a briſk rubbing of it with a burniſher. See the article BURNISHER.

Book-binders burniſh the edges of their books, by rubbing them with a dog's tooth. Gold and ſilver are burniſhed, by rubbing them with a wolf's tooth, or by the bloody ſtone, or by tripoli, a piece of white wood, emery, and the like. Deer are ſaid to burniſh their heads, by rubbing off a downy white ſkin from their horns, againſt a tree.

BURNLEY, a market-town of Lancaſhire, about twenty-ſeven miles ſouth-eaſt of Lancaſter; weſt longitude 2° 5′, and north latitude 53° 40′.

BURNT, ſomething that has undergone the operation of burning: thus we ſay, burnt alum, burnt lead, burnt wine, &c. ſee the articles ALUM, &c.

Burnt bodies are not only dry and aſtringent, but loſe a great deal, if not all their other medicinal virtues.

BURR, the round knob of a horn next a deer's head.

BURRE, BOUREE, or BOREE, a kind of dance, compoſed of three ſteps joined together in two motions, begun with a crotchet riſing. The firſt couplet contains twice four meaſures, the ſecond twice eight. It conſiſts of a ballance and coupee.

BURREGREG, a conſiderable river of the kingdom of Fez, in Africa; which taking its riſe in the Atlas-mountains, falls into the ocean not far from the ſtraits of Gibraltar.

BURR-PUMP, or BILDGE-PUMP, differs from the common pump, in having a ſtaff 6, 7, or 8 feet long, with a bar of wood, whereto the leather is nailed, and this ſerves inſtead of a box. So two men, ſtanding over the pump, thruſt down this ſtaff, to the middle whereof is faſtened a rope, for 6, 8, or 10 to hale by, thus pulling it up and down.

BURROCK, a ſmall wier or dam, where wheels are laid in a river, for the taking of fiſh.

BURROW, or BOROUGH. See the article BOROUGH.

BURROWS, holes in a warren, which ſerve as a covert for hares, rabbits, &c.

BURSA, or PRUSA, in geography, the capital of Bythinia, in Aſia-Minor, ſituated in a fine fruitful plain, at the foot of mount Olympus, about an hundred miles ſouth of Conſtantinople; eaſt longitude 29°, north latitude 40° 30′.

BURSARS, in the ſcotch univerſities, are youths choſen as exhibitioners, and maintained for the ſpace of four years at the rate of 100l. *per annum* Scots.

BURSE, in a commercial ſenſe, a place for merchants to meet in, and negotiate their buſineſs publicly, with us called exchange. See the article EXCHANGE.

BURTON, in geography, the name of two market towns, the one in Staffordſhire, and the other in Lincolnſhire; the former being ſituated about eighteen miles eaſt of Stafford, in 1° 36′ weſt longitude, and 52° 40′ north latitude, and the latter, thirty miles north of Lincoln, in 30′ weſt longitude, and 53° 40′ north latitude.

BURTON is alſo the name of a market-town

in Weſtmoreland, about thirty miles ſouth-weſt of Appleby; weſt longitude 2° 35′, and north latitude 54° 10′.

BURTON, in the ſea-language, a ſmall tackle conſiſting of two ſingle blocks, and may be made faſt any where at pleaſure, for hoiſting ſmall things in and out; and will purchaſe more than a ſingle tackle with two blocks.

BURY, in geography, a market-town of Lancaſhire, about thirty miles ſouth-eaſt of Lancaſter; weſt longitude 2° 20′, north latitude 53° 36′.

BURY St. EDMUND'S, or St. EDMUND'S-BURY, the county town of Suffolk, about twelve miles eaſt of Newmarket, and ſeventy north-eaſt of London; eaſt longitude 45′, and north latitude 52° 20′.

BURYING, the ſame with burial. See the article BURIAL.

BUSH, a term uſed for ſeveral ſhrubs of the ſame kind, growing cloſe together: thus we ſay, a furze-buſh, bramble-buſh, *&c.*

It is ſometimes uſed in a more general ſenſe, for any aſſemblage of thick branches interwoven and mixed together.

Burning-BUSH, that buſh wherein the Lord appeared to Moſes at the foot of mount Horeb, as he was feeding his father-in-law's flocks.

As to the perſon that appeared in the buſh, the ſcripture, in ſeveral places, calls him by the name of God: he ſays of himſelf, "that he is the Lord, the God "who is the God of Abraham, Iſaac, "and Jacob, *&c.*" And Moſes, bleſſing Joſeph, ſays, "let the bleſſing of him "that dwelt in the buſh, come upon the "head of Joſeph." But the hebrew and the greek ſeptuagint import, that the angel of the Lord appeared to him. St. Stephen, and ſeveral others, read it in the ſame manner; and moreover ſome ſay, that it was an angel that repreſented the Lord: yet the antients hold the ſon of God to be the perſon that appeared in the buſh.

The mahometans believe, that one of Moſes's ſhoes, put off by him as he drew near the burning-buſh, was placed in the ark of the covenant, in order to preſerve the memory of this miracle.

BUSHEL, a meaſure of capacity for dry things, as grain, fruits, dry pulſe, *&c.* containing four pecks, or eight gallons, or one-eighth of a quarter.

A buſhel, by 12 Henry VII. c. 5. is to contain eight gallons of wheat; the gallon eight pounds of troy-weight; the ounce twenty ſterlings, and the ſterling thirty-two grains, or corns of wheat growing in the midſt of the ear. See the articles MEASURE and WEIGHT.

At Paris the buſhel is divided into two half buſhels; the half buſhel into two quarts; the quart into two half quarts; the half quart into two litrons; and the litron into two half litrons. By a ſentence of the provoſt of the merchants of Paris, the buſhel is to be eight inches two lines and a half high, and ten inches in diameter; the quart, four inches nine lines high, and ſix inches nine lines wide; the half quart, four inches three lines high, and five inches diameter; the litron, three inches and a half high, and three inches ten lines in diameter. Three Buſhels make a minot; ſix, a mine; twelve, a ſeptier; and an hundred and forty-four, a muid. In other parts of France, the buſhel varies.

Oats are meaſured in a double proportion to other grains, ſo that twenty four buſhels of oats make a ſeptier, and 288 a muid. The buſhel of oats is divided into four picotins, the picotin into two half quarts, or four litrons. For ſalt, four buſhels make one minot, and ſix a ſeptier; for coals, eight buſhels make one minot, ſixteen a mine, and 320 a muid; for lime, three buſhels make a minot, and forty-eight minots a muid.

BUSKIN, a kind of ſhoe, ſomewhat in manner of a boot, and adapted to either foot, and worn by either ſex.

This part of dreſs, covering both the foot and mid-leg, was tied underneath the knee; it was very rich and fine, and principally uſed on the ſtage by actors in tragedy. It was of a quadrangular form, and the ſole was ſo thick, as that by means thereof, men of the ordinary ſtature might be raiſed to the pitch and elevation of the heroes they perſonated. The colour was generally purple on the ſtage: herein it was diſtinguiſhed from the ſock, worn in comedy, that being only a low common ſhoe. The buſkin ſeems to have been worn, not only by actors, but by girls, to raiſe their height; travellers and hunters alſo made uſe of it, to defend themſelves from the mire.

In claſſic authors, we frequently find the buſkin uſed to ſignify tragedy itſelf, in regard it was a mark of tragedy on the ſtage. It is alſo to be underſtood for a lofty ſtrain, or high ſtile.

BUSS,

BUSS, in maritime-affairs, a ſmall ſea veſſel, uſed by us and the Dutch in the herring fiſhery, commonly from forty-eight to ſixty tons burden, and ſometimes more: a buſs has two ſmall ſheds or cabbins, one at the prow, and the other at the ſtern; that at the prow ſerves for a kitchen.

Every buſs has a maſter, an aſſiſtant, a mate, and ſeamen in proportion to the veſſel's bigneſs: the maſter commands in chief, and without his expreſs order, the nets cannot be caſt, nor taken up; the aſſiſtant has the command after him; and the mate next, whoſe buſineſs is to ſee the ſeamen manage their rigging in a proper manner, to mind thoſe who draw in their nets, and thoſe who kill, gut, and cure the herrings, as they are taken out of the ſea: the ſeamen do generally engage for a whole voyage in the lump. The proviſion which they take on board the buſſes, conſiſt commonly in biſket, oat-meal, and dried or ſalt-fiſh; the crew being content for the reſt with what freſh fiſh they catch. See FISHERY.

BUST, or BUSTO, in ſculpture, *&c.* a term uſed for the figure or portrait of a perſon in relievo, ſhewing only the head, ſhoulders, and ſtomach, the arms being lopped off: it is uſually placed on a pedeſtal or conſole.

M. Felibien obſerves, that tho', in painting, one may ſay a figure appears in buſto, yet it is not properly called a buſt; that word being confined to things in relievo. The buſt is the ſame with what the latins called *herma*, from the Greek hermes, Mercury, the image of that god being frequently repreſented in that manner by the Athenians.

BUST is alſo uſed, eſpecially by the Italians, for the trunk of a human body, from the neck to the hips.

BUSTARD, in ornithology, the engliſh name of a genus of birds, called by authors otis. See the article OTIS.

BUSTUARII, in roman antiquity, gladiators who fought about the buſtum, or funeral pile of a deceaſed perſon of diſtinction, in the ceremony of his obſequies.

This cuſtom was found to be leſs barbarous than the firſt practice was of ſacrificing captives at the buſtum, or on the tomb of warriors; inſtances whereof we meet with both in roman and greek antiquities: the blood ſpilt on this occaſion, was ſuppoſed to appeaſe, by way of ſacrifice, the infernal gods, that they might be more propitious to the manes of the deceaſed.

BUSTUARIÆ MOECHÆ, according to ſome, women that were hired to accompany the funeral, and lament the loſs of the deceaſed: but others are of opinion, that they were rather the more common proſtitutes, that ſtood among the tombs, graves, and other ſuch lonely places.

BUSTUM, in antiquity, a pyramid or pile of wood, upon which were antiently placed the bodies of the deceaſed, in order to be burnt. Some authors ſay, that it was properly called buſtum after the burning, *quaſi bene uſtum*; that before the burning it was called *pyra*, and during the burning, *rogus*. See BURNING.

The buſtum in the Campus Martius was encompaſſed round with white ſtone, and an iron rail.

BUT, or BUTT. See the article BUTT.

BUTCHER, a perſon who ſlaughters cattle for the uſe of the table, or who cuts up and retails the ſame.

Among the antient Romans, there were three kinds of eſtabliſhed butchers, whoſe office was to furniſh the city with the neceſſary cattle, and to take care of preparing and vending their fleſh. The ſuarii provided hogs; the pecuarii or boarii, other cattle, eſpecially oxen; and under theſe was a ſubordinate claſs whoſe office was to kill, called lanii, and carnifices. To exerciſe the office of butcher among the Jews with dexterity, was of more reputation than to underſtand the liberal arts and ſciences. They have a book concerning ſhamble-conſtitution; and in caſe of any difficulty, they apply to ſome learned rabbi for advice: nor was any allowed to practiſe this art, without a licenſe in form; which gave the man, upon evidence of his abilities, a power to kill meat, and others to eat what he killed; provided he carefully read every week for one year, and every month the next year, and once a quarter during his life, the conſtitution above-mentioned. We have ſome very good laws for the better regulation and preventing the abuſes committed by butchers. A butcher that ſells ſwine's fleſh meazled, or dead of the murrain, for the firſt offence ſhall be amerced; for the ſecond, have the pillory; for the third be impriſoned and make fine; and for the fourth, abjure the town. Butchers not ſelling meat at reaſonable prices, ſhall forfeit double the value,

value, leviable by warrant of two juſtices of the peace. No butcher ſhall kill any fleſh in his ſcalding-houſe, or within the walls of London, on pain to forfeit for every ox ſo killed, 12d. and for every other beaſt, 8d. to be divided betwixt the king and the proſecutor.

BUTCHER-BIRD, in ornithology, the engliſh name of the lanius. See LANIUS.

BUTCHER'S-BROOM, *ruſcus*, in botany. See the article RUSCUS.

BUTE, an iſland of Scotland, lying in the mouth of the frith of Clyde, ſouth of Cowal in Argyleſhire. It gives the title of earl to a branch of the Stuart family. Bute and Cathneſs ſend only one member to parliament between them, each chuſing in its turn, whereof Bute has the firſt choice.

BUTEO, the BUZZARD, in ornithology, a bird of the hawk-kind, about the ſize of a ſmall pullet, the beak of which is of a bluiſh black, and covered with a yellow membrane down to the noſtrils.

BUTLER, *buticularius*, the name antiently given to an officer in the court of France, being the ſame as the grand echanſon, or great cup-bearer of the preſent times.

BUTLER, in the common acceptation of the word, is an officer in the houſes of princes and great men, whoſe principal buſineſs is to look after the wine, plate, &c.

BUTLERAGE *of wine* is a duty of two ſhillings for every ton of wine imported by merchants ſtrangers; being a compoſition in lieu of the liberties and freedoms granted to them by king John and Edward I. by a charter called charta mercatoria.

Butlerage was originally the only cuſtom that was payable upon the importation of wines, and was taken and received by virtue of the regal prerogative, for the proper uſe of the crown. But for many years paſt, there having been granted by parliament ſubſidies to the kings of England, and the duty of butlerage not repealed, but confirmed, they have been pleaſed to grant the ſame away to ſome nobleman, who, by virtue of ſuch grant, is to enjoy the full benefit and advantage thereof, and may cauſe the ſame to be collected in the ſame manner that the kings themſelves were formerly wont to do.

BUTMENTS, in architecture, thoſe ſupporters or props on or againſt which the feet of arches reſt. See BRIDGE.

BUTMENT is alſo the term given to little places taken out of the yard or ground-plot of a houſe, for a buttery, ſcullery, &c.

BUTOMUS, the FLOWERING-RUSH, in botany, a genus of plants of the enneandria hexagynia claſs, the flower of which conſiſts of ſix roundiſh, concave, fading petals, alternately exterior, ſmaller, and more acute: the fruit conſiſts of ſix oblong, gradually attenuated capſules, erect, of one valve, opening inwards, and containing ſeveral oblong cylindric ſeeds, obtuſe at both ends. The herb is ſaid to be of an aperient and deobſtruent quality. See plate XXXIV. fig. 4.

BUTRINTO, a port-town of Epirus, or Canina, in Turky, in Europe, ſituated oppoſite to the iſland of Corfu, at the entrance of the gulph of Venice; eaſt longitude 20° 40′, north latitude 39° 45′.

BUTT, in commerce, a veſſel or meaſure of wine, containing two hogſheads, or 126 gallons. See the article PIPE.

BUTT, or BUTT-ENDS, in the ſea language, are the fore-ends of all planks under water, as they riſe, and are joined one end to another.

Butt-ends in great ſhips are moſt carefully bolted; for if any one of them ſhould ſpring or give way, the leak would be very dangerous and difficult to ſtop.

BUTTER, a fat unctuous ſubſtance, prepared from milk by heating or churning it.

It was late before the Greeks appear to have had any notion of butter; their poets make no mention of it, and yet are frequently ſpeaking of milk and cheeſe. The Romans uſed butter no otherwiſe than as a medicine, never as a food. The antient chriſtians of Egypt burnt butter in their lamps inſtead of oil; and in the roman churches, it was antiently allowed, during chriſtmas time, to burn butter inſtead of oil, on account of the great conſumption of it other ways.

For the making of butter, when it has been churned, open the churn, and with both hands gather it well together, take it out of the butter-milk, and lay it into a very clean bowl, or earthen pan; and if the butter be deſigned to be uſed ſweet, fill the pan with clear water, and work the butter in it to and fro, till it is brought to a firm conſiſtence of itſelf, without any moiſture. When this has been done, it muſt be ſcotched and ſliced over with the point of a knife, every way as thick

as

as poſſible, in order to fetch out the ſmalleſt hair, mote, bit of rag, ſtrainer, or any thing that may have happened to fall into it. Then ſpread it thin in a bowl and work it well together, with ſuch quantity of ſalt as you think fit, and make it up into diſhes, pounds, half pounds, *&c.* The newer the butter is, the more wholeſome and pleaſant it is; and that which is made in May, is eſteemed the beſt.

Butter, by the texture and nature of its ſubſtance, tends to relax the ſolids, and ſupplies the juices with light and adheſive particles. Upon the firſt account, it may be good in dry and coſtive conſtitutions; but muſt be hurtful in lax, moiſt, and corpulent ones. By the levity and tenacity of its parts, it is alſo very apt to ſtop in the glands and capillaries; by which means it fouls the viſcera, but particularly the ſmall glands of the ſkin; hence it is apt to produce blotches, and all cutaneous diſeaſes.

There are as many ſorts of butter, as there are different milks of animals whereof to make it: that of the cow is moſt in uſe. It is uſed every where, and there is hardly any ſauce made without it. The northern people, however, make more uſe of it than others.

Every barrel of butter, imported from abroad, pays a duty of 3 s. $10\frac{20}{100}$ d. whereof 3 s. $4\frac{1}{2}$ d. is drawn back on exporting it. Iriſh butter pays only a duty of 1 s. $11\frac{10}{100}$ d. the hundred weight; whereof 1 s. $8\frac{25}{100}$ d. is drawn back on exporting it.

BUTTER, among chemiſts, a name given to ſeveral preparations, on account of their conſiſtence reſembling that of butter; as butter of antimony, of arſenic, of wax, of lead, of tin, *&c.*

BUTTER-BUR, in botany, the engliſh name of a genus of plants, called by authors petaſites. See the article PETASITES.

BUTTER-FISH, a name given to the gunnellus of authors. See GUNNELLUS.

BUTTERFLY, the engliſh name of a numerous genus of inſects, called by zoologiſts papilio. See the article PAPILIO.

BUTTERFLY FISH, a ſpecies of the blennius of ichthyologiſts, with a furrow between the eyes. See BLENNIUS.

BUTTERFLY-SHELL, in natural hiſtory, the engliſh name of a ſpecies of voluta.

BUTTERIS, in the manege, an inſtrument of ſteel, fitted to a wooden handle, wherewith they pare the foot, or cut the hoof of a horſe.

BUTTER-MILK, a kind of ſerum that remains behind, after the butter is made. Of this curds may be made, which are good when eat either with cream, wine, ale or beer. And the whey kept in a clean ſtrong veſſel, is an excellent cooling, wholeſome drink, to be uſed in the ſummer inſtead of other drink, and will quench the thirſt better than beer.

Butter-milk is eſteemed an excellent food, in the ſpring eſpecially, and is particularly recommended in hectic fevers.

BUTTER-WORT, in botany, the engliſh name of a diſtinct genus of plants, called by botaniſts pinguicula. See the article PINGUICULA.

BUTTERY, a room in the houſes of noblemen and gentlemen, belonging to the butler, where he depoſites the utenſils belonging to his office, as table linen, napkins, pots, tankards, glaſſes, cruets, ſalvers, ſpoons, knives, forks, pepper, muſtard, *&c.*

As to its poſition, Sir Henry Wotton ſays, it ought to be placed on the north ſide of the building, which is deſigned for offices. In England we generally place it near the cellar, *viz.* the room commonly juſt on the top of the cellar ſtairs.

BUTTOCK OF A SHIP, is that part of her, which is her breadth right a-ſtern, from the tack upwards; and a ſhip is ſaid to have a broad or a narrow buttock, according as ſhe is built, broad or narrow at the tranſum.

BUTTON, an article of dreſs, ſerving to faſten cloaths tight about the body, made of metal, ſilk, mohair, *&c.* in various forms. Metal buttons are either caſt in moulds, in the manner of other ſmall works, (See FOUNDERY) or made of thin plates of gold, ſilver, or braſs, whoſe ſtructure is very ingenious, though but of little uſe.

Buttons of all ſorts are prohibited to be imported.

BUTTON, among gardeners, denotes much the ſame with bud. See the article BUD.

BUTTON, in the manege. Button of the reins of a bridle is a ring of leather, with the reins paſſed through it, which runs all along the length of the reins. To put a horſe under the button is, when a horſe is ſtopped without a rider upon his back, the reins being laid on his neck, and the button lowered ſo far down, that the reins bring in the horſe's head, and fix it to the true poſture or carriage. It is not only the horſes, which are managed in the hand,

hand, that muſt be put under the button; for the ſame method muſt be taken with ſuch horſes as are bred between two pillars, before they are backed.

BUTTON'S-BAY, the name of the north part of Hudſon's-bay, in North America, whereby Sir Thomas Button attempted to find out a north-weſt paſſage to the Eaſt-Indies. It lies between 80° and 100° weſt longitude, and between 60° and 66° north latitude.

BUTTON-TREE, a name ſometimes given to two very diſtinct genuſſes of plants, the platanus and cephalanthus.

BUTTON-TREE of Jamaica, the ſame with the conocarpus of botaniſts.

BUTTRESS, a kind of butment built archwiſe, or a maſs of ſtone or brick, ſerving to prop or ſupport the ſides of a building, wall, &c. on the outſide, where it is either very high, or has any conſiderable load to ſuſtain on the other ſide, as a bank of earth, &c.

Buttreſſes are uſed againſt the angles of ſteeples and other buildings of ſtone, &c. on the outſide, and along the walls of ſuch buildings as have great and heavy roofs, which would be ſubject to thruſt the walls out, unleſs very thick, if no buttreſſes were placed againſt them: they are alſo placed for a ſupport and butment againſt the feet of ſome arches, that are turned acroſs great halls, in old palaces, abbeys, &c.

The theory and rules of buttreſſes are one of the deſiderata in architecture; but the ſize and weight of them ought to be in proportion to the dimenſions and form of the arch, and the weight which is ſuperincumbent on it.

As to the weight of the materials, both on the arch and in the buttreſs, it is not difficult to calculate: but it may be objected, that there may be a ſenſible difference, as to the ſtrength and goodneſs of the mortar, which may, in ſome meaſure, compenſate for the weight of the buttreſs.

BUTZAW, a town of lower Saxony, in Germany: it ſtands upon the river Varnow, on the road from Schwerin to Roſtock.

BUXTON, a place in the peak of Derbyſhire, celebrated for medicinal waters; the hotteſt in England, next to Bath.

BUXTON-WELLS. The ſtrata of earth and minerals, in the parts adjacent to Buxton, are peat moſs, blue clay, iron, and coal, mixed with ſulphur, and braſil. See the article BATH.

The warm waters there, at preſent, are the bath, which takes in ſeveral warm ſprings, St. Ann's-well, a hot and cold ſpring riſing up into the ſame receptacle, and Bingham-well.

Theſe waters greatly promote digeſtion, unleſs they are drank too long, in which caſe they relax the ſtomach, and retard all the digeſtion: they are well adapted to obſtructions of every kind, whence they produce ſurprizing effects in gouty, rheumatic, athritic and ſcorbutic pains: their irritation and effects are relaxation and dilution, and wherever theſe are indicated, this water will be of the greateſt ſervice: it is of great benefit in thoſe obſtructions, which ariſe from a ſharpneſs, ſaltneſs, or earthineſs of the blood and lymph, or from an accidental diſpoſition to a rarefaction of the blood. As this water is warm, highly impregnated with a mineral ſteam, vapour, or ſpirit; it is ſignally beneficial to cramps, convulſions, dry aſtmas, bilious cholic, ſtiffneſs, &c.

They adviſe both drinking and bathing in the uſe of theſe waters; only the laſt is of bad conſequence in the gout, inward inflammations, fevers, dyſentery, large inward tumours, or in an outward preſſure of the body.

As to the age, ſex, and conſtitution of the patient, the particular lightneſs and purity of theſe waters recommend their uſe, as ſafe and ſucceſsful to almoſt every body in whatever circumſtances.

BUXUS, the BOX-TREE, in botany, a genus of the monoecia tetrandria claſs of plant, in which the male and female flowers are diſtinct; the former conſiſting of only two roundiſh petals, ſomewhat larger than thoſe of the cup, to which, however, they bear a very great reſemblance; whereas the latter, or female flower, conſiſts of three ſuch petals. The fruit is a roundiſh trilocular capſule, containing two oblong ſeeds, roundiſh on one ſide and plain on the other.

BUYS, a town of Dauphine, in France, ſituated on the confines of Provence: eaſt longitude 5° 20°, and north latitude 44° 25′.

BUZZARD, *buteo*, in ornithology, the engliſh name of ſeveral ſpecies of the hawk-kind, diſtinguiſhed from each other by particular epithets; as, 1. The bald-buzzard, with blue legs. 2. The common buzzard. 3. The honey-buzzard. 4. The ſubbuteo, or the hen-harrier, and the ring-tail. 5. The moor-buzzard. See the common buzzard repreſented in plate XXXIV. fig. 5.

BYGHOF, or BYGOW, a city of Lithuania,


BRITISH MUSEUM

Fig. 1. BUNTING.



Fig. 2. BUPHTHALMUM.

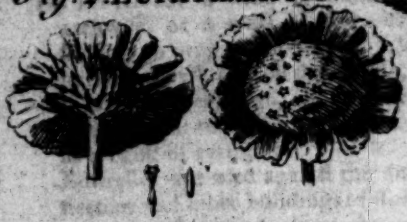


Fig. 3. BURNING GLASSES.

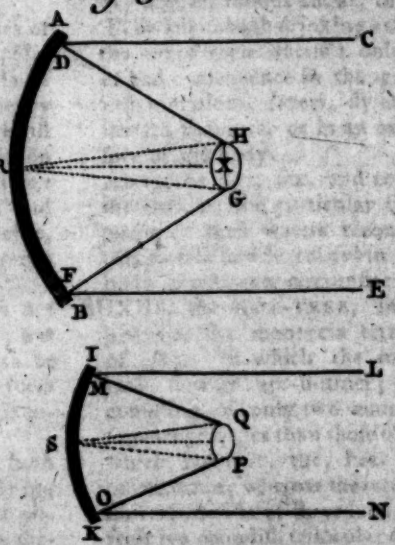


Fig. 4. BUTOMUS.



Fig. 5. BUZZARD.



Fig. 6. BYSSUS.



J. Jefferys sculp

nia, in Poland, ſituated on the river Nieper; eaſt longitude 30°, and north latitude 53°.

BY-LAWS, or BYE-LAWS, private and peculiar laws for the good government of a city, court, or other community, made by the general conſent of the members.

All by-laws are to be reaſonable, and for the common benefit, not private advantage of any particular perſons, and muſt be agreeable to the public laws in being. If made by corporations, they are to be approved by the lord-chancellor or chief juſtices, or juſtices of aſſize, on pain of 40l. if againſt the good of the public.

But it is ſaid, a corporation cannot make by-laws without a cuſtom for it, or the king's charter; nor may they make any by-law to bind ſtrangers that live out of their corporation, or to reſtrain a perſon from working in or ſetting up his trade, though it may be for the order and regulating of trades; and notwithſtanding ſuch a by-law may inflict a reaſonable penalty, which may be recovered by diſtreſs or action of debt, yet none can be impriſoned upon it, as it is contrary to *magna charta*.

BYRLAW, or BURLAW LAWS, in Scotland, are made and determined by neighbours, elected by common conſent in byrlaw courts. The men, choſen as judges, are called byrlaw or burlaw-men, and take cognizance of complaints between neighbour and neighbour.

BYSSUS, in botany, a genus of moſſes, conſiſting of plain, ſimple, capillary filaments.

The byſſus is the moſt imperfect of all vegetables, no part of its fructification having been hitherto diſcovered: its filaments are uniform, and often ſo fine as to be ſcarce diſcernible ſingly; though, in a cluſter, they make a kind of fine down. Botaniſts are not agreed, whether the byſſus be properly a moſs or fungus. Linnæus is of the latter opinion, and the generality of botaniſts of the former. Dillenius thinks it is of a middle nature between both.

This difference of opinion probably aroſe from hence, that authors have confounded two very diſtinct vegetables under the name byſſus; the one, the filamentoſe bodies, deſcribed above, which are the only true byſſi; and the other, the duſty matter found on rotten vegetables, conſiſting of ſmall globules, which are truly fungi, or muſhrooms. See plate XXXIV. fig. 6.

The byſſi are nearly allied to the confervæ; from which, however, they differ, as conſiſting of finer, ſhorter, and more tender filaments, and not growing in water, as the confervæ do.

BYSSUS, in antiquity, that fine egyptian linen, whereof the tunics of the jewiſh prieſts were made.

Philo ſays, that the byſſus is the cleareſt and moſt beautiful, the whiteſt, ſtrongeſt, and moſt gloſſy ſort of linen; that it is not made of any thing mortal, that is to ſay, of wool, or the ſkin of any animal, but that it comes out of the earth, and becomes always whiter, and more ſhining, when it is waſhed as it ſhould be.

C

C, The third letter, and ſecond conſonant of the alphabet, is formed by forcing the breath between the tongue, elevated near the palate (to make the voice ſomewhat ſibilous) with the lips open. It has two ſounds, hard and ſoft; hard, like k before a, o, u, l, and r; as in call, coſt, cup, clean, crop; and ſoft, like ſ before i, e, and y; as in city, ceſſion, cyder: before h it has a peculiar ſound, as in chance, chalk: in chord, chart, and ſome other words, it is hard like k: but in many French words it is ſoft before h, like ſ, as in chaiſe, chagrin.

As an abbreviature, C ſtands for Caius, Carolus, Cæſar, *condemno*, &c. and C C for *conſulibus*.

As a numeral, C ſignifies 100, CC 200, &c.

Among the French, C ſtands for *compte*, account; C. C. for *compte courant*, account current; M. C. *mon compte*, my account; C. O. *compte ouvert*, open account; S. C. *ſon compte*, his account; L. C. *leur compte*, their account; N. C. *notre compte*, our account, &c.

C, in muſic, the higheſt part in the thorough baſs; again, a ſimple C, or rather a ſemicircle, placed after the cliff, intimates, that the muſic is in common time,

time, which is either quick or ſlow, as it is joined with alegro or adagio: if alone, it is uſually adagio.

If the C be croſſed or turned, the firſt requires the air to be played quick, and the laſt very quick.

CAABA, or CAABAH, properly ſignifies a ſquare building; but is particularly applied by the Mahometans, to the temple of Mecca, built, as they pretend, by Abraham, and Iſhmael his ſon. It is towards this temple they always turn their faces when they pray, in whatever part of the world they happen to be. The Mahometans will have the caaba to have been a place of worſhip in Adam's days: at firſt it was only a tent, which had been ſent down from heaven, as a proper place wherein to worſhip the true God. It was accordingly often viſited by Adam on that account, as well as by Seth his ſon, who firſt built a ſtone temple on the ſpot. This having been demoliſhed by the deluge, was afterwards rebuilt by Abraham and Iſhmael. The tradition adds, that it was on occaſion of Abraham's ſacrifice of his ſon Iſhmael, that this edifice was raiſed by order of God himſelf; and that the horns of the ram, which had been ſacrificed in Iſhmael's place, were faſtened to the golden ſpout of the caaba, where they continued to the time of Mahomet, who took them away, to remove from the Arabs all occaſion of idolatry.

The length of the caaba is about twenty-four cubits, its breadth twenty-three, and height twenty-ſeven cubits; the door which is on the eaſt-ſide, being four cubits from the ground, and the floor level with the bottom of the door. In the corner next this door, is the famous black ſtone, which is ſet in ſilver, and exceedingly reſpected by the Mahometans. The pilgrims kiſs it with great devotion, and it is by ſome called the right-hand of God on earth. It is fabled to be one of the precious ſtones of Paradiſe, which fell down to the earth with Adam, and being taken up again at the deluge, was brought back by the angel Gabriel to Abraham when he was building the caaba. It was at firſt whiter than milk, but grew black long ago; ſome ſay by the touch of a menſtruous woman, others by the ſins of mankind, others by the numerous kiſſes of the devotees. On the north-ſide of the caaba, within a ſemicircular incloſure, lies the white ſtone, ſaid to be the ſepulchre of Iſhmael, which receives the rain water that falls off the caaba, by a ſpout formerly of wood, but now of gold. The caaba has a double roof, ſupported within by three octangular pillars of aloes wood, between which, on a bar of iron, hang ſome ſilver lamps. The outſide is covered with rich black damaſk, adorned with an embroidered border of gold, which is changed every year, and was formerly ſent by the caliphs, afterwards by the ſultans of Egypt, but now provided by the turkiſh emperors. At a ſmall diſtance from the caaba, on the eaſt ſide is the ſtation or place of Abraham, where is another ſtone wherein they pretend to ſhew the foot-ſteps of that patriarch, ſuppoſed to have been made when he ſtood on it in building the caaba, where it ſerved him for a ſcaffold, with this peculiar advantage, that it roſe and fell of itſelf as he had occaſion.

This temple enjoys the privilege of an aſſylum for all ſorts of criminals; but it is moſt remarkable for the pilgrimages made to it by the devout Muſſulmen, who pay ſo great a veneration to it, that they believe a ſingle ſight of its ſacred walls, without any particular act of devotion, is as meritorious, in the ſight of God, as the moſt careful diſcharge of one's duty, for the ſpace of a whole year, in any other temple.

CAB, an hebrew dry meaſure, being the ſixth part of a ſeah or ſatum, and the eighteenth part of an epha: a cab contained $2\frac{1}{6}$ pints of our corn meaſure; a quarter-cab was the meaſure of dove's dung, or more properly a ſort of chick-peaſe, called by this name, which was ſold at Samaria, during the ſiege of that city, for five ſhekels.

CABBAGE, a ſpecies of braſſica. See the article BRASSICA.

There are ſeveral ſorts of cabbages cultivated in the gardens for the uſe of the kitchen, as the common white and red cabbages, the ruſſian cabbage, the batterſea and ſugar-loaf cabbages, the ſavoy cabbages; the borecole, the cauliflower, the broccoli, &c.

The manner of ſaving the ſeeds of all the beſt ſorts of cabbages is, to make choice of your beſt cabbages about the middle of November, and theſe being pulled up, ſhould be carried to ſome ſhed, and hung for three or four days by the ſtalks, that the water may drain from between the leaves; then plant them in ſome border, under an hedge, quite down to the middle of the cabbage.

If

If the winter ſhould prove very hard, you ſhould lay a little ſtraw or peaſe-haulm lightly upon them, taking it off as often as the weather proves mild. In the ſpring, when thoſe cabbages ſhoot out ſtrongly, and divide into a number of ſmaller branches, you muſt ſupport their ſtems; and if the weather ſhould prove very hot and dry, you ſhould refreſh them with water once a week: when the tops begin to look brown, cut off the extreme part of every ſhoot; and when your ſeeds begin to ripen, you muſt take care that the birds do not deſtroy it, as they are very fond of theſe ſeeds: in order to prevent which, ſome throw old nets over their ſeeds; but the beſt method is, to get a quantity of bird-lime, and dawb over a parcel of ſlender twigs, faſtened at each end to ſtronger ſticks, placed near the upper part of the ſeed, that the birds may alight upon them, and by that means be faſtened thereto: when the ſeeds are fully ripe, you muſt cut them off, and, after drying, threſh them out, and preſerve them in bags for uſe.

In Holland and Flanders, there are an incredible number of mills, for preparing an oil from the ſeeds of reddiſh cabbages, ſaid to be good for ſeveral purpoſes.

Sea-CABBAGE, a name by which the crambe of botaniſts is ſometimes called. See the article CRAMBE.

CABBAGE-TREE, a name ſometimes given to the palm-tree, called by Linnæus, phœnix. See the article PHOENIX.

CABBAGING, among gardeners, a term uſed for the knitting of cabbages into round heads. See the article CABBAGE.

CABBALA, properly ſignifies tradition, and is the name of a myſterious kind of ſcience, thought to have been delivered by revelation to the antient Jews, and tranſmitted by oral tradition to thoſe of our times; ſerving for the interpretation of the books both of nature and ſcripture.

The manner in which Maimonides explains the cabbala, or traditions of the Jews, in his preface to the Miſhna, is as follows: 'God not only delivered the law to Moſes on Mount Sinai, but the explanation of it likewiſe. When Moſes came down from the Mount, and entered into his tent, Aaron went to viſit him, and Moſes acquainted Aaron with the laws he had received from God, together with the explanation of them. After this Aaron placed himſelf at the right-hand of Moſes, and Eleazar and Ithmar, the ſons of Aaron, were admitted, to whom Moſes repeated what he had juſt before told to Aaron. Theſe being ſeated, the one on the right, the other on the left-hand of Moſes, the ſeventy elders of Iſrael, who compoſed the Sanhedrim, came in. Moſes again declared the ſame laws to them, with the interpretations of them, as he had done before to Aaron and his ſons. Laſtly, all who pleaſed of the common people were invited to enter, and Moſes inſtructed them likewiſe in the ſame manner as the reſt: ſo that Aaron heard four times what Moſes had been taught by God upon Mount Sinai; Eleazar and Ithmar, three times; the ſeventy elders, twice; and the people, once. Moſes afterwards reduced the laws which he had received into writing, but not the explanations of them: theſe he thought it ſufficient to truſt to the memories of the above-mentioned perſons, who being perfectly inſtructed in them, delivered them to their children, and theſe again to theirs from age to age.'

The Cabbala, therefore, is properly the oral law of the Jews, delivered down by word of mouth from father to ſon; and it is to theſe interpretations of the written law, that our Saviour's cenſure is to be applied, when he reproves the Jews for making the commands of God of none effect, through their traditions.

Some of the Rabbins pretend, that the origin of the cabbala is to be referred to the angels, that the angel Raziel inſtructed Adam in it; the angel Japhiel, Shem; the angel Zedekiel, Abraham, *&c.* But the truth is, theſe explications of the law are only the ſeveral interpretations and deciſions of the Rabbins, on the law of Moſes; in the framing of which, they ſtudied principally the combinations of particular words, letters, and numbers, and by that means pretended to diſcover clearly the true ſenſe of the difficult paſſages of the ſcripture.

This is properly the artificial cabbala, to diſtinguiſh it from ſimple tradition; and it is of three ſorts: The firſt, called Gematria, conſiſts in taking letters as figures, and explaining words by the arithmetical value of the letters of which they are compoſed. For inſtance, the Hebrew letters of שלה *Jabo-ſhilah*, i. e. *Shiloh ſhall come*, make up the ſame

arithmetical number, as משיח *Meſſiach*, the Meſſiah, from whence they conclude that Shiloh ſignifies the Meſſiah.

The ſecond kind of artificial cabbala, which is called Notaricon, conſiſts in taking each particular letter of a word for an entire diction, for example of בראשית, *Bereſchith*, which is the firſt word of Geneſis, compoſed of the letters B. R. A. SCH. J. TH. they make *Bara-Rakiah-Arez-Schamaim-Jam-Tehemoth*, i. e. *He created the firmament, the earth, the heavens, the ſea, and the deep*; or in forming one intire diction out of the initial letters of many; thus, in *Atah-Gibbor-Leholam-Adonai*, i. e. *Thou art ſtrong for ever, O Lord*, they put the initial letters of each word that compoſe this ſentence together, and form the word אגלא *Agla*, which ſignifies either *I will reveal*, or a *drop of dew*, which is the cabbaliſtic name of God.

The third kind of cabbala, called Themura, conſiſts in changing and tranſpoſing the letters of a word: thus, of the word *Bereſchith* with which Geneſis begins, they make *A-betiſri*, which ſignifies the *firſt of the month Tiſri*; and infer from thence, that the world was created on the firſt day of the month Tiſri, which anſwers nearly to our September.

The cabbala, according to the Jews, is a noble and ſublime ſcience, conducting men, by eaſy methods, to the profoundeſt truths. Without it, they think the holy ſcriptures could not be diſtinguiſhed from profane books, wherein we find ſome miraculous events, and as pure morality as that of the law, if we did not penetrate into the truths locked up under the external cover of the literal ſenſe. Some viſionaries among the Jews believe that Jeſus Chriſt wrought his miracles by virtue of the myſteries of the cabbala. Some learned men are of opinion that Pythagoras and Plato learned the cabbaliſtic art of the Jews in Egypt. Others, on the contrary, ſay that the philoſophy of Pythagoras and Plato furniſhed the Jews with the cabbala. Moſt of the heretics in the primitive chriſtian church fell into the vain conceits of the cabbala, particularly the Gnoſtics, Valentinians, and Baſilidians; and Henry More aſſures us, that all his learning and philoſophy ended in mere ſcepticiſm, till he applied his mind to the divine and hidden ſcience of the cabbala, which in a ſhort time brought him forth into the moſt glorious light, and filled his ſoul with notices utterly ineffable.

On the other hand, Dr. Burnet examines into the merits of the ſeveral parts of the cabbala, and finds it to be without any rational foundation, and not conducing to any real knowledge. But he conjectures, that the moſt antient cabbala, before it was confounded and defiled with fables, might contain ſomething of the original of things, and their gradations; particularly, that before the creation, all things had their being in God; that from him they flowed as emanations; that they will all flow back again into him, when they are deſtroyed; and that there will ſucceed other emanations and regenerations, and other deſtructions and abſorptions to all eternity, as they had been from all eternity; that nothing is produced out of nothing; and that the things produced, never return to nothing, but always have their ſubſiſtence in God.

CABBALISTS, the jewiſh doctors, who profeſs the ſtudy of the cabbala.

In the opinion of theſe men, there is not a word, letter, or accent in the law, without ſome myſtery in it. The Jews are divided into two general ſects; the karaites, who refuſe to receive either tradition or the talmud, or any thing but the pure text of ſcripture; and the rabbiniſts, or talmudiſts, who, beſides this, receive the traditions of the antients, and follow the talmud.

The latter are again divided into two other ſects; pure rabbiniſts, who explain the ſcripture, in its natural ſenſe, by grammar, hiſtory, and tradition; and cabbaliſts, who, to diſcover hidden myſtical ſenſes, which they ſuppoſe God to have couched therein, make uſe of the cabbala, and the myſtical methods above mentioned.

CABBIN, or CABIN. See CABIN.

CABECA, or CABESSE, a name given to the fineſt ſilks in the Eaſt Indies, as thoſe from 15 to 20 *per cent.* inferior to them, are called barina. The indian workmen endeavour to paſs them off one with the other: for which reaſon, the more experienced european merchants take care to open the bales, and to examine all the ſkains one after another. The Dutch diſtinguiſh two ſorts of cabeças; namely, the moor cabeça and the common cabeça. The former is ſold at Amſterdam for about 21 ½ ſchellinghen flemiſh, and the other for about 18 ½.

CABENDA, a port-town of Congo, in Africa, ſubject to the Portugueſe; eaſt longitude 12°, and ſouth latitude 4°.

CABI-

CABIDOS, or CAVIDOS, a long meaſure uſed at Goa, and in other places of the Eaſt Indies belonging to the Portugueſe, to meaſure ſtuffs, linens, &c. and equal to ⅘ of the Paris ell.

CABIN, or CABBIN, in the ſea-language, a ſmall room, or apartment, whereof there are a great many in ſeveral parts of a ſhip; particularly on the quarter-deck, and on each ſide of the ſteerage, for the officers of the ſhip to lie in.

The great cabin is the chief of all, and that which properly belongs to the captain, or chief commander.

CABINET, or CABBINET, the moſt retired place in the fineſt part of a building, ſet apart for writing, ſtudying, or preſerving any thing that is precious.

A complete apartment conſiſts of a hall, anti-chamber, chamber, and cabinet, with a gallery on one ſide. Hence we ſay, a cabinet of paintings, curioſities, &c.

CABINET alſo denotes a piece of joiner's workmanſhip, being a kind of preſs or cheſt, with ſeveral doors and drawers.

There are common cabinets of oak or of cheſnut, varniſhed cabinets of China and Japan, cabinets of inlaid work, and ſome of ebony, or the like ſcarce and precious woods.

Formerly the dutch and german cabinets were much eſteemed in France, but are now quite out of date, as well as the cabinets of ebony, which came from Venice.

CABIRI, a term in the theology of the antient Greeks, ſignifying great and powerful gods; being a name given to the gods of Samothracia. They were alſo worſhiped in other parts of Greece, as Lemnos and Thebes, where the Cabiria were celebrated in honour of them: theſe gods are ſaid to be, in number, four, *viz.* Axieros, Axiocerſa, Axiocerſus, and Caſmilus. See the next article.

CABIRIA, feſtivals in honour of the Cabiri, celebrated in Thebes and Lemnos, but eſpecially in Samothracia, an iſland conſecrated to the Cabiri. All who were initiated into the myſteries of theſe gods, were thought to be ſecured thereby from ſtorms at ſea, and all other dangers. The ceremony of initiation was performed, by placing the candidate, crowned with olive branches, and girded about the loins with a purple ribband, on a kind of throne, about which the prieſts, and perſons before initiated, danced.

CABLE, a thick, large, ſtrong rope, commonly of hemp, which ſerves to keep a ſhip at anchor.

There is no merchant ſhip, however weak, but has, at leaſt, three cables; namely, the chief cable, or cable of the ſheet-anchor, a common cable, and a ſmaller one.

Cable is alſo ſaid of ropes, which ſerve to raiſe heavy loads, by the help of cranes, pullies, and other engines. The name of cable is uſually given to ſuch as have, at leaſt, three inches in diameter; thoſe, that are leſs, are only called ropes of different names, according to their uſe.

Every cable, of what thickneſs ſoever it be, is compoſed of three ſtrands; every ſtrand of three ropes; and every rope of three twiſts: the twiſt is made of more or leſs threads, according as the cable is to be thicker or thinner.

In the manufacture of cables, after the ropes are made, they uſe ſticks, which they paſs firſt between the ropes of which they make the ſtrands, and afterwards between the ſtrands of which they make the cable, to the end that they may all twiſt the better, and be more regularly wound together; and alſo, to prevent them from twining or intangling, they hang, at the end of each ſtrand and of each rope, a weight of lead or of ſtone.

The number of threads, each cable is compoſed of, is always proportioned to its length and thickneſs; and it is, by this number of threads, that its weight and value are aſcertained: thus, a cable of three inches circumference, or one inch diameter, ought to conſiſt of 48 ordinary threads, and weigh 192 pounds; and on this foundation, is calculated the following table, very uſeful for all people engaged in marine commerce, who fit out merchant-men for their own account, or freight them for the account of others.

A table of the number of threads and weight of cables of different circumferences.

Circumf.	Threads	Weight.
3 inches.	48	192 pounds.
4	77	308
5	121	484
6	174	696
7	238	952
8	311	1244
9	393	1572
10	485	1940
11	598	2392
12	699	2796

Cir-

Circumf.	Threads.	Weight.
13 inches.	821	3284 pounds.
14	952	3808
15	1093	4372
16	1244	4976
17	1404	5616
18	1574	6296
19	1754	7016
20	1943	7772

Sheet anchor CABLE is the greateſt cable belonging to a ſhip.

Serve or plate the CABLE, is to bind it about with ropes, clouts, *&c.* to keep it from galling in the hawſe.

To ſplice a CABLE, is to make two pieces faſt together, by working the ſeveral threads of the rope, the one into the other.

Pay more CABLE, is to let more out of the ſhip. *Pay cheap the cable*, is to hand it out apace. *Veer more cable*, is to let more out, *&c.*

CABLED, in heraldry, a term applied to a croſs, formed of the two ends of a ſhip's cable; ſometimes alſo to a croſs covered over with rounds of rope, more properly called a croſs-corded, as in plate XXXV. fig. 1.

CABLED-FLUTE, in architecture, ſuch flutes as are filled up with pieces, in the form of a cable. See FLUTES.

CABO DE ISTRIA, the capital of the province of Iſtria, in the dominion of Venice, ſituated on the gulph of Venice, about twelve miles ſouth of Trieſte: eaſt longitude 14° 20′, and north latitude 45° 50′.

CABOCHED, in heraldry, is when the heads of beaſts are born without any part of the neck, full faced.

CABOLETTO, in commerce, a coin of the republic of Genoa, worth about three pence of our money.

CABUIA, a ſort of hemp, which grows in the province of Panama, in ſouth America. The plant, which produces it, has leaves like thoſe of a thiſtle, though broader, thicker, and greener. When it is ripe, they ſteep it in water, as they do hemp in Europe, and, after it is dried, beat it with wooden hammers, till there remain nothing but the threads. Of theſe, the Indians make ropes of different ſizes, and ſtrings, which are ſo extremely hard and ſtrong, that they uſe them for ſawing iron, by mounting them on a bow, and putting a little ſand upon the iron, as the work advances.

CABUL, the capital of a province of the ſame name, on the north-weſt of India. Both the town and province of Cabul were ceded to the Perſians in 1739: eaſt long. 69°, and north lat. 33° 30′.

CABURNS, on ſhip-board, are ſmall lines, made of ſpun-yarn, to bind cables, ſeize tackles, or the like.

CACAGOGA, among antient phyſicians, ointments, which, applied to the fundament, procure ſtools. Paulus Ægineta directs to boil alum, mixed with honey, for that purpoſe.

CACAO, the CHOCOLATE-TREE, in botany, a genus of trees, called by Linnæus theobroma. See THEOBROMA.

The fruit of this tree, called cacao-nuts, in order to be good, muſt have a very brown and pretty even ſkin or peel, and when it is taken off, the kernel muſt appear full, plump, and ſhining, of a hazle-nut colour, very dark on the outſide, a little more reddiſh within, of a bitteriſh and aſtringent taſte, without any greeniſh or muſty ſavour. It is one of the moſt oily fruits, which nature produces, and has this wonderful advantage that it never grows rank, how old ſoever it be, as all other fruits do, which have any analogy with this: ſuch as almonds, kernels of pine-apples, piſtachio-nuts, olives, *&c.* It is brought from Caracca, Marignan, and ſeveral of the iſlands in the Weſt-Indies: but the firſt kind is the beſt. The Mexicans eſteem cacao-nuts as anodyne, and eat them raw, to aſſuage pains of the bowels. In ſome parts of America, the ſeeds are uſed by the Indians as money; twelve or fourteen are valued at a ſpaniſh real, or ſix-pence three farthings ſterling. Of this fruit is made an excellent conſerve, which far excels all the ſweet-meats made in Europe, and alſo chocolate; for the preparation of which ſee the article CHOCOLATE.

CACERES, a town of Eſtremadura, in Spain, about ſeventeen miles ſouth-eaſt of Alcantara; weſt longitude 6° 45′, and north latitude 39° 12′.

CACHAN, a city of Perſia, ſituated in a large plain, about twenty leagues from Iſpahan.

It is remarkable for its manufactures of gold and ſilver ſtuffs, and of fine earthen ware.

CACHAO, or KECHIO, the capital of the kingdom of Tonquin, ſituated on the weſtern ſhore of the river Domea; eaſt long. 105°, and north lat. 22° 30′.

CACHECTIC, ſomething partaking of

the nature of, or belonging to, a cachexy. See the article CACHEXY.

CACHEMIRE, or KACHEMIRE, a province of Asia, in the country of the Mogul. The inhabitants are thought to have been originally Jews, because they speak much of Moses and Solomon, whom they believe to have travelled into their country.

This also is the name of the capital of that province, situated in 76° east long. and 34° 30′ north latitude.

CACHEXY, in medicine, such a disposition of the body as depraves the nourishment throughout its whole habit.

The causes of a cachexy are any bad state of the nutritious juices, or a fault in the vessels designed for their reception, or a defect of the assimilating faculty. From the first of these causes arise many disorders, according to the various colour, quantity, tenacity, acrimony, fluidity of the distempered humour, as a discolouring of the skin, a swelling under the eyes; the fleshy parts become bloated; and lastly, the body is either reduced to a skeleton, or afflicted with a leucophlegmatia and a dropsy. The vessels may be too contractile or too lax, and consequently the disorders that proceed from thence, may be looked upon as the causes of this disease, and the fault may lie in the assimilating faculty, if the force, by which the fluids are circulated, is too languid or too violent. From what has been said, the diagnostic signs are evident, and the prognostics may be gathered from the consideration of the cause, duration, the effects and degree of the disease, &c.

The cure sometimes requires a correction and a moderate inspissation of the too acid fluid. When it is tenacious and stagnating, it must be dissolved. But the medicines must be varied, according to the various causes, from whence these two faults arise. The greatest care must be taken, that the aliment be most like the healthy fluids, and easy of digestion. The organs of digestion should be disposed to perform their office by mild digestives, then by vomits and purges, and by medicines which promote digestion. When, by the use of these, the morbific matter is attenuated, you must proceed to saponaceous remedies, diuretics, and sudorifics, and last of all to chalybeates, with exercise, frictions, and baths.

When a cachectic tabes arises, from too great an acrimony, the nature of that acrimony must be inquired into, and corrected by its contraries.

CACHRYS, in botany, a genus of plants belonging to the pentandria-digynia class; the general flower of which is uniform; the proper flowers consist of five lanceolated, equal, and somewhat erect petals; the fruit is roundish, angulated, obtuse, very large, and separable into two parts, with two seeds very large, very convex on one side, and plane on the other; fungous, and containing a single ovato-oblong nucleus. See plate XXXV. fig. 2.

CACOCHYMIA, κακοχυμία, a vicious state of the vital humours, especially of the mass of blood, arising either from a disorder in the secretions, or excretions, or from external contagion. This word is, by some writers, applied to the abundance or excess of any ill humour, whether it be bile, pituita, or any other, providing there be one that thus offends in quantity.

CACOETHES, in medicine, an epithet applied, by Hippocrates, to malignant and difficult distempers: when applied to signs or symptoms, it imports what is very bad and threatening; and if given to tumours, ulcers, &c. it denotes a great malignancy.

CACTUS, TORCH-THISTLE, in botany, a genus of the icosandria-monogynia class of plants, comprehending the torch-thistle, melon-thistle, pereskia, and cochineal-plant; the flower of which consists of a great many broad obtuse petals, the exterior ones short, and the interior ones long and connivent: the fruit is an oblong umbilicated berry, covered with little leaves, like the cup, with one cell, containing numerous, roundish, and small seeds.

This is a culinary plant, which is blanched like celery, and like that eaten raw with pepper and salt in Italy. In the medicinal virtues, it agrees with the cynara, or artichoke.

CADARI, or KADARI, a sect of Mahometans, which attributes the actions of men to men alone, and not to the divine decree determining his will; and denies all absolute decrees, and predestination. Ben Aun calls the cadari, the magi or manichees of the mussulmen.

CADE, a cag, cask, or barrel. A cade of herrings is a vessel, containing the quantity of 500 red herrings, or of sprats 1000.

CADI-

CADE-LAMB, a young lamb, weaned and brought up by hand in a houſe.

CADE-OIL, an oil much uſed in France and Germany; it is prepared from the fruit of a ſpecies of cedar, called oxycedrus.

CADENCE, in muſic, according to the antients, is a ſeries of a certain number of notes, in a certain interval, which ſtrike the ear agreeably, and eſpecially at the end of the ſong, ſtanza, &c. It conſiſts ordinarily of three notes.

Cadence, in the modern muſic, may be defined a certain concluſion of a ſong, or of the parts of a ſong, which divide it, as it were, into ſo many numbers or periods. It is when the parts terminate in a chord or note, the ear ſeeming naturally to expect it; and is much the ſame in a ſong, as the period that cloſes the ſenſe in a paragraph of a diſcourſe.

A cadence is either perfect, conſiſting of two notes ſung after each other, or, by degrees, conjoined in each of the two parts, and, by theſe means, ſatisfying the ear; or imperfect, when its laſt meaſure is not in the octave or uniſon, but a ſixth or third. It is called imperfect, becauſe the ear does not acquieſce in the concluſion, but expects a continuation of the ſong. The cadence is ſaid to be broken, when the baſs, inſtead of falling a fifth, as the ear expects, riſes a ſecond, either major or minor. Every cadence is in two meaſures; ſometimes it is ſuſpended, in which caſe it is called a repoſe, and only conſiſts of one meaſure, as when the two parts ſtop at the fifth, without finiſhing the cadence. With regard to the baſs-viol, Mr. Rouſſeau diſtinguiſhes two cadences, one with a reſt, when the finger, that ſhould ſhake the cadence, ſtops a little, before it ſhakes, on the note immediately above that which requires the cadence; and one without a reſt, when the ſtop is omitted.

All cadences are to be accommodated to the characters of the airs.

CADENCE, in the manege, an equal meaſure or proportion, obſerved by a horſe in all his motions; ſo that his times have an equal regard to one another, the one does not embrace or take in more ground than the other, and the horſe obſerves his ground regularly.

CADENCE, in rhetoric and poetry, the running of verſe or proſe, otherwiſe called the numbers, and by the antients ῥυθμος. See the article RHYME.

It would be eaſy to give inſtances, in our own, as well as the greek and roman poets, when the cadence is admirably adapted to the ſubject in hand.

CADENCE, in dancing, is when the ſeveral ſteps and motions follow, or correſpond, to the notes and meaſures of the muſic.

CADENE, one of the ſorts of carpets, which the Europeans import from the Levant. They are the worſt ſort of all, and are ſold by the piece from one to two piaſters *per* carpet.

CADET, the younger ſon of a family, is a term naturalized in our language from the French. At Paris, among the citizens, the cadets have an equal patrimony with the reſt. At Caux, in Normandy, the cuſtom, as with us, is to leave all to the eldeſt, except a ſmall portion to the cadets. In Spain, it is uſual for one of the cadets in great families, to take the mother's name.

CADET is alſo a military term, denoting a young gentleman who chooſes to carry arms in a marching regiment, as a private man. His views are to acquire ſome knowledge in the art of war, and to obtain a commiſſion in the army. Cadet differs from volunteer, as the former takes pay, whereas the latter ſerves without any pay.

CADI, or CADHI, a judge of the civil affairs in the turkiſh empire.

It is generally taken for the judge of a town; judges of provinces being diſtinguiſhed by the appellation of molla's.

In Biledulgerid in Africa, the cadi decides in ſpiritual affairs.

CADILESCHER, a capital officer of juſtice, among the Turks, anſwering to a chief juſtice among us.

It is ſaid that this authority was originally confined to the ſoldiery, but that, at preſent, it extends itſelf to the determination of all kinds of law-ſuits; yet nevertheleſs ſubject to appeals.

There are but three cadileſchers in all the grand ſignior's territories; the firſt is, that of Europe; the ſecond, of Natolia; and the third reſides at Grand Cairo. This laſt is the moſt conſiderable: they have their ſeats in the divan next to the grand vizir.

CADIZ, a city and port-town of Andaluſia in Spain, ſituated on the north-weſt end of the iſland of Leon, or Lyon, oppoſite to Port St. Mary on the continent, about ſixty miles ſouth-weſt of Seville, and forty north-weſt of Gibraltar: weſt

weſt longitude 6° 40′, and north latitude 36° 30′.

The iſland it ſtands on is in length about eighteen miles; the ſouth-weſt end is about nine broad, but the other end where the city ſtands, not above two. It has a communication with the continent by means of a bridge; and with the oppoſite ſhore, forms a bay of twelve miles long, and ſix broad. About the middle of this bay, there are two headlands, or promontories, one on the continent, and the other on the iſland, which advance ſo near together, that the forts upon them, called the Puntal and Matagorda, command the paſſage; and within theſe forts is the harbour, which it is impoſſible for an enemy to enter, till he has firſt taken the forts.

CADIZADELITES, a ſect of mahometans very like the antient ſtoics. They ſhun feaſts and diverſions, and affect an extraordinary gravity in all their actions; they are continually talking of God, and ſome of them make a jumble of chriſtianity and mahometaniſm; they drink wine, even in the faſt of the ramazan; they love and protect the chriſtians; they believe that Mahomet is the Holy Ghoſt, practiſe circumciſion, and juſtify it by the example of Jeſus Chriſt.

CADMIA, in the natural hiſtory of the antients, the name of two diſtinct ſubſtances, called native cadmia, and factitious cadmia. The native cadmia was only one of the copper ores; but this is not the cadmia ſo much cried up by them, for its abſorbent and deſiccative virtues: this was the factitious cadmia, a recrement of copper, produced in the copper-works, of which there were three kinds. The fineſt of all was found in the very mouths of the furnaces, from whence it iſſued out with the flame and ſmoke, and was therefore called capnitis, or ſmoky cadmia: a great part of this was neceſſarily loſt in the air; but the little that adhered to the mouths of the furnaces, was collected in form of a powder, or fine aſhes.

The fineſt cadmia next to this, was that found on the roofs of the furnaces, hanging down in form of cluſters of round bubbles; and therefore called the cadmia botryitis, the botryoide, or cluſtered cadmia, which was much more firm and heavy than the capnitis, and of a greyiſh or purple colour, whereof the latter was always eſteemed the beſt.

A third kind of cadmia, was that gathered about the ſides of the furnaces, as being not light or fine enough to aſcend to the roof: it was called cadmia placitis, or cruſt-like cadmia. Of this cruſtated cadmia they diſtinguiſhed two kinds, the one of a blackiſh colour on the outſide, variegated with ſpots on the inſide, called onychitis, on account of the reſemblance it bore to the onyx in its veins and clouds; and the other, which was quite black throughout, they called oſtracitis.

All theſe kinds of cadmia, now diſuſed, were highly extolled by the antients. They tell us, that in diſeaſes of the eyes, collyriums prepared with them, ſcarce ever failed of curing; nor is their efficacy in wounds and ulcers leſs cried up.

Among modern writers, it is not unuſual to confound theſe ſubſtances with tutty. See the article TUTTY.

CADORIN, a province of Italy, in the territories of Venice, bounded by the biſhopric of Brixen, on the north; by Friuli, on the eaſt; by the Belluneſe, on the ſouth; and by the Trentin, on the weſt.

CADRITES, a ſort of mahometan friars, who once a week ſpend great part of the night in turning round, holding each other's hands, and repeating inceſſantly the word *hai*, which ſignifies living, and is one of the attributes of God; during which, one of them plays on a flute. They never cut their hair, nor cover their heads, and always go barefooted; they have liberty to quit their convent when they pleaſe, and to marry.

CADSAND, an iſland on the coaſt of dutch Flanders, ſituated at the mouth of the Scheld, whereby the Dutch command the navigation of that river.

CADUCEUS, in antiquity, Mercury's rod, or ſceptre, being a wand entwiſted by two ſerpents, borne by that deity, as the enſign of his quality and office, given him according to the fable, by Apollo, for his ſeven-ſtringed harp.

Wonderful properties are aſcribed to this rod by the poets, as laying men aſleep, raiſing the dead, &c. It is uſed alſo as a ſymbol of peace. The caduceus, as found on ſome medals, is a common ſymbol, ſignifying good conduct, peace, and proſperity.

CADUS, in antiquity, a wine veſſel of a certain capacity, containing eighty amphoræ, or firkins, each of which, according to the beſt accounts, held nine gallons.

CÆCILIA, in zoology, the name of a genus of ſerpents, the characters of which are theſe: the body is naked with wrinkled ſides: the upper lip is prominent be-

yond the reſt of the mouth, and has two tentacula: and there is no tail.

Of this genus, authors enumerate ſeveral ſpecies, diſtinguiſhed by the number of their rugæ, or wrinkles.

Some phyſicians have preſcribed them as ſuderifics.

CÆCUM, or COECUM, in anatomy, the blind gut, or firſt of the thick inteſtines.

Of the three large inteſtines, called from their ſize, inteſtina craſſa, the firſt is the cæcum, ſituated at the right os ileum; it reſembles a bag, and has a vermiform or worm-like appendage fixed to it. It begins at the termination of the ileum, and terminates in the bottom of the bag, or ſacculus, which it forms: its length is no more than three or four fingers breadth. In the appendage opening into the ſide of the cæcum, there are ſome glands, which, together with its erect ſituation, ſeems to ſhew that ſome fluid is ſecreted there. In hens, this is double; as alſo in many other fowls. In fiſhes, there are frequently a vaſt number of them, and in ſome ſpecies not leſs than four hundred. In man, it is at the utmoſt ſingle, and is often wanting.

CÆMENT, in a general ſenſe, any glutinous ſubſtance, capable of uniting and keeping things together in cloſe coheſion. In this ſenſe, under cæment, are comprehended mortar, ſolder, glue, &c. but, ſtrictly ſpeaking, the term cæment only denotes a glutinous compoſition uſed in cæmenting broken glaſſes, china-ware, or earthen-ware.

One of the fineſt, and at the ſame time ſtrongeſt cæment for this purpoſe, is the juice of garlic ſtamped in a ſtone mortar: this, if the operation is done with care, leaves little or no mark. Another cæment is made by beating the white of an egg very clear, and mixing with it fine powdered quick lime, or iſinglaſs, powdered chalk, and a little lime may be mixed together, and diſſolved in fair water. With theſe, the glaſſes, &c. are to be cæmented, and then ſet in the ſhade to dry; a caution which ſhould always be obſerved, whichever of the above cæments are uſed.

A cæment for cracked chemical-glaſſes, that will ſtand the fire, may be thus prepared: take wheat-flower, fine powdered Venice glaſs, and pulverized chalk, of each an equal quantity; of fine brick-duſt, one half of the ſaid quantity; and a little ſcraped lint: mix them all together with the whites of eggs; then, ſpreading this mixture upon a linen-cloth, apply it to the cracks of the glaſſes, which muſt be well dried before they are uſed. Old varniſh is another cæment that will anſwer the ſame purpoſe.

CÆMENT, among builders, a ſtrong ſort of mortar, uſed to bind bricks or ſtones together for ſome kind of mouldings; or in cæmenting a block of bricks for the carving of capitals, ſcrolls, or the like. There are two ſorts, 1. Hot cæment, which is the moſt common, made of reſin, bees-wax, brick-duſt, and chalk, boiled together. The bricks to be cæmented with this kind, muſt be made hot with the fire, and rubbed to and fro after the cæment is ſpread, in the ſame manner as joiners do when they glue two boards together. 2. Cold cæment, made of Cheſhire-cheeſe, milk, quick lime, and whites of eggs. This cæment is leſs uſed than the former, and is accounted a ſecret known but to few bricklayers.

CÆMENT, among engravers, jewellers, &c. a compoſition of fine brick-duſt well ſifted, reſin and bees-wax, in uſe among theſe artificers to keep the metals to be engraven or wrought on firm to the block; and alſo to fill up what is to be cheſſeled.

CÆMENT, in chemiſtry, a kind of menſtruum compounded of ſalts, ſulphurs, and brick reduced to dry powders, and ſtrewed betwixt plates of metal, in order to raiſe their colour, or ſeparate one metal from another. See CÆMENTATION.

Cæments are prepared of ſuch ſalts and other ingredients, as by their acrimony corrode and ſeparate the ſilver, copper, or other metals from the body of the gold.

There are various kinds of cæments, but thoſe called the common and royal, are moſtly uſed by refiners. The firſt is made of brick-duſt, nitre, and verdegris; the ſecond, of ſal gemmæ and armoniac, each one part, two parts of common ſalt, and four of bole; the whole reduced into a paſte, with urine.

In compounding cæments, it muſt be obſerved to uſe a weak ſort in refining gold of a little value; but when the gold has but a ſmall mixture of other metalline particles in it, then the moſt efficacious cæments are to be adminiſtered, by which means much time and expence will be ſaved.

Cæments uſed in raiſing the colour of gold are called gradatory cæments.

In all theſe, copper is an ingredient.

CÆMENT POTS, or thoſe uſed in the cæmen-

mentation of metals, are made of fine potter's clay, and that either pure, or mixed with ſand in different proportions.

CÆMENTATION, in a general ſenſe, the corroding of metals in a dry form, by means of the fumes of acid ſalts. See the article CÆMENT.

It is performed in the following manner. After the copper has been ſeparated as much as poſſible by copelling, a ſtratum of cæment of about half an inch in thickneſs, is ſpread in the bottom of the cæment-pot; over this are laid thin plates of gold, then another ſtratum of cæment, and ſo on alternately till the pot be filled within half an inch of the brim. This being done, the pot is covered up, and encompaſſed with fire which ſhould be made gradually fiercer and fiercer; and in ſixteen or twenty hours after they have been red hot, entirely removed, that every thing may cool by degrees. Then the pots are to be opened, the cæment taken out, and if it is grown too hard, to be ſoftened by a ſprinkling of hot water. The plates of gold muſt be waſhed in hot water, and the water renewed, till it be free from all ſaline taſte; for the ſalts, together with the metal they have corroded, will be contained in the plates of gold. The gold muſt be tried with the touch-ſtone, or ſome more certain method, to know if it has the degree of fineneſs required. And if it is not pure enough, it muſt be cæmented a ſecond time, and if neceſſary, with a ſtronger cæment.

For the method of making ſteel by cæmentation, ſee the article STEEL.

CAEN, the capital of a county of the ſame name, in Normandy, ſituated on the river Orne, about ſeventy-five miles weſt of Rouen, and thirty ſouth weſt of Havre-de-Grace; weſt longitude 25′, north latitude 49° 20′.

It has an univerſity, firſt founded by king Henry VI. of England, in 1431.

CAERFILLY, a town of Glamorganſhire, about five miles north of Landaff; weſt long. 3° 15′, and north latitude 51° 35′.

CÆRITES, or CÆRITUM TABULÆ, in roman antiquity, tables or regiſters in which the names of the Cærites were regiſtered. The people of Cære were accounted citizens of Rome, but had no privilege of voting: hence when a roman citizen was degraded, if a ſenator, he was expelled the ſenate; if a knight, he loſt the public horſe; and if a plebeian, his name was inſerted in the regiſter of the Cærites; that is, he was ſubject to all taxes, but incapable of voting or enjoying any public office.

CAERLEON, a market-town of Monmouthſhire, ſituated on the river Uſke, about ſixteen miles ſouth-weſt of Monmouth: weſt longitude 3°, north latitude 51° 40′.

CAERMARTHEN, the capital of Caermarthenſhire in Wales, ſituated upon the river Towy, about fifteen miles from the ſea.

CAERNARVAN, the chief town of Caernarvanſhire, in Wales, ſituated upon the river Menay.

CAERWIS, a market-town in Flintſhire, in north Wales, about five miles eaſt of St. Aſaph, and four weſt of Flint: weſt long. 3° 25′, north latit. 53° 20.

CÆSALPINA, in botany, a genus of the pentandria-monogynia claſs of plants, having no cup: the corolla is of the ringent kind, formed of one petal; the fruit is an oblong, accuminated legumen, containing one cell; the ſeeds are numerous and oval.

CÆSAR, in roman antiquity, a title borne by all the emperors, from Julius Cæſar, to the deſtruction of the empire. It was alſo uſed as a title of diſtinction, for the intended or preſumptive heir of the empire, as king of the Romans is now uſed for that of the german empire.

This title took its riſe from the ſurname, of the firſt emperor, C. Julius Cæſar, which, by a decree of the ſenate, all the ſucceeding emperors were to bear. Under his ſucceſſor, the appellation of Auguſtus being appropriated to the emperors, in compliment to that prince, the title Cæſar was given to the ſecond perſon in the empire, tho' ſtill it continued to be given to the firſt; and hence the difference betwixt Cæſar uſed ſimply, and Cæſar with the addition of Imperator Auguſtus.

The dignity of Cæſar remained the ſecond of the empire, till Alexius Comnenus having elected Nicephorus Meliſſenus Cæſar, by contract; and it being neceſſary to confer ſome higher dignity on his own brother Iſaacius, he created him Sebaſtocrator, with the precedency over Meliſſenus; ordering, that in all acclamations, &c. Iſaacius Sebaſtocrator ſhould be named the ſecond, and Meliſſenus Cæſar, the third.

CÆSARIAN SECTION, in midwifery, a chirurgical operation, by which the fœtus is delivered from the womb of its mother, when it cannot be done in the natural way.

There are chiefly three different caſes, in which this operation is practicable: the firſt is, when the mother is dead, either in the birth, or by ſome accident, while the fœtus is reaſonably ſuppoſed to be yet ſurviving in the womb: the ſecond is, when the mother is living, and the fœtus dead, but incapable of being extracted or expelled by the natural paſſages; the third and laſt is, when the mother and fœtus are both living, but the latter is incapable of being brought into the world through the natural paſſages. In the firſt caſe, this operation ſhould be performed, not only as ſoon as poſſible, but even before the circulation in the mother is ſtopped, becauſe the fœtus cannot long ſurvive: then the abdomen muſt be laid open, by a crucial inciſion, as in common diſſections, or by making a longitudinal inciſion on one ſide; and if the fœtus ſhould have fallen into the cavity of the abdomen, from a rupture of the uterus, &c. it ſhould be taken out immediately: but if it remains concealed in the womb, that body ſhould be cautiouſly opened, and the fœtus extracted. In the ſecond caſe, the ſurgeon muſt make a longitudinal inciſion on the outſide of the rectus muſcle, between the navel and the angle of the os ilium, and thereby extract the fœtus. If the fœtus is contained in the fallopian tube, or in the ovary, thoſe parts are to be opened, and the fœtus, with its placenta, then removed: but if the fœtus is concealed in the uterus, this is alſo to be opened, by a longitudinal inciſion, ſufficient to give a paſſage to the fœtus, and its appendages.

In the third and laſt caſe, when the birth is prevented by a calloſity of the vagina, or ſomething amiſs in the mouth of the uterus, a diviſion and dilatation of theſe parts, is preferable to the cæſarian ſection, as leſs dangerous; and the ſame may be ſaid when the vagina is obſtructed by the hymen, or ſome other preternatural membrane: but when the calloſity of the vagina is ſo large and hard, as to render the birth that way impracticable, if it was to be divided, there is no other means left but the cæſarian ſection. If a rupture of the uterus ſhould be made in the agonies of labour, ſo as to let out the fœtus into the cavity of the abdomen, in this caſe it will be neceſſary to make an inciſion in that part made moſt prominent by the fœtus, which ſhould be extracted, as before.

CÆSARIANS, *cæſarienſes*, in roman antiquity, were officers or miniſters of the roman emperors: they kept the account of the revenues of the emperors, and took poſſeſſion, in their name, of ſuch things as devolved, or were confiſcated to them.

CÆSTUS, in antiquity, a large gantlet made of raw hide, which the wreſtlers made uſe of when they fought at the public games.

This was a kind of leathern ſtrap, ſtrengthened with lead, or plates of iron, which encompaſſed the hand, the wriſt, and a part of the arm, as well to defend theſe parts, as to enforce their blows.

CÆSTUS, or CÆSTUM, was alſo a kind of girdle, made of wool, which the huſband untied for his ſpouſe the firſt day of marriage, before they went to bed.

This relates to Venus's girdle, which Juno borrowed of her, to entice Jupiter to love her. See the article CESTUS.

CÆSURA, in the antient poetry, is when, in the ſcanning of a verſe, a word is divided ſo, as one part ſeems cut off, and goes to a different foot from the reſt; as,

Menti|ri no|li, nun|quam men|dacia| proſunt.

where the ſyllables *ri*, *li*, *quam*, and *men*, are cæſuras.

Cæſura more properly denotes a certain and agreeable diviſion of the words between the feet of a verſe, whereby the laſt ſyllable of a word becomes the firſt of a foot; as in

Arma virumque cano, trojæ qui primus ab oris.

where the ſyllables *no* and *jæ* are cæſuras.

CÆSURA, or CÆSURE, in the modern poetry, denotes a reſt, or pauſe, towards the middle of an alexandrine verſe, by which the voice and pronunciation are aided, and the verſe, as it were, divided into two hemiſtichs.

In alexandrine verſes of twelve or thirteen ſyllables, the cæſure muſt always be on the ſixth; in verſes of ten, on the fourth; and in thoſe of twelve on the ſixth; verſes of eight ſyllables, muſt not have any cæſure.

CÆTERIS PARIBUS, a latin term, often uſed by mathematical and phyſical writers, the words literally ſignifying *the reſt, or the other things, being alike, or equal.* Thus we ſay, the heavier the bullet, *cæteris paribus*, the greater the range, *i. e.* by how much the bullet is heavier; if the length and diameter of the piece, and the quantity and ſtrength of the powder

powder be the ſame, by ſo much will the utmoſt range or diſtance of a piece of ordnance be greater.

Thus alſo, in a phyſical way, we ſay, the velocity and quantity of the blood circulating, in a given time, through any ſection of an artery, will, *cæteris paribus*, be according to its diameter, and nearneſs to, or diſtance from the heart.

CAFFA, or KAFFA, a city and port-town of Crim Tartary, ſituated on the ſouth-eaſt part of that peninſula; eaſt longitude 37°, north latitude 44° 55′.

It is the moſt conſiderable town in the country, and gives name to the ſtraits of Caffa, which run from the Euxine, or Black-ſea, to the Palus Meotis, or ſea of Azoph.

CAFFILA, a company of merchants or travellers, who join together in order to go with more ſecurity through the dominions of the grand mogul, and through other countries on the continent of the Eaſt-Indies.

The caffila differs from a caravan, at leaſt in Perſia; for the caffila belongs properly to ſome ſovereign, or to ſome powerful company of Europe; whereas a caravan is a company of particular merchants, each trading upon his own account. The Engliſh and Dutch have each of them their caffila at Gambron.

CAFFILA on the coaſt of Guzerat or Cambaya, ſignifies a ſmall fleet of merchant-ſhips.

CAFFRARIA, the country of the Caffers, or Hottentots, in the moſt ſoutherly part of Africa, lying in the form of a creſcent about the inland country of Monomotapa, between 35° ſouth latitude and the tropic of Capricorn; and bounded on the eaſt, ſouth, and weſt, by the Indian and Atlantic oceans.

Moſt of the ſea-coaſts of this country is ſubject to the Dutch, who have built a fort near the moſt ſouthern promontory, called the Cape of Good Hope.

CAG, or KEG, of ſturgeon, *&c.* a barrel, or veſſel, that contains from four to five gallons.

CAGE, *cavea*, an incloſure made of wire, wicker, or the like, interwoven lattice-wiſe, for the confinement of birds, or wild beaſts.

The cage, in the roman amphitheatres, was a place wherein ſavage animals were confined. It was incloſed with iron rails, and open a-top, ſo as to be ſeen to the bottom by the ſpectators.

CAGLI, a town of the province of Urbino, in the pope's territories, about twenty-five miles ſouth of the city of Urbino: eaſt long. 14°, north latit. 43° 15′.

CAGLIARI, the capital of the iſland of Sardinia, ſituated on a bay of the ſea in the ſouthern part of that iſland; eaſt longitude 9° 12′, north lat. 39°.

CAHORS, the capital of the territory of Querci, in the province of Guienne, in France, ſituated about forty-five miles north of Tholouſe; eaſt longitude 1°, north latitude 44° 25′.

It is the ſee of a biſhop, and has an univerſity.

CAJANABURG, the capital of the province of Cajania, or eaſt Bothnia, in Sweden, ſituated on the north-eaſt part of the lake Cajania, about three hundred miles north-eaſt of Abo; eaſt longit. 27°, north latitude 63° 50′.

CAJAZZO, a town of the province of Lavoro, in the kingdom of Naples, ſituated about ſixteen miles north-eaſt of the city of Naples; eaſt longitude 15°, north latitude 41° 15′.

CAIFUM, a city of China, ſituated in the province of Honan, on the river Crocceus, 350 miles north-weſt of Nanking; eaſt longitude 113° 30′, north latitude 35°.

CAIMACAN, or CAIMACAM, in the turkiſh affairs, a dignity in the Ottoman empire, anſwering to lieutenant, or rather deputy, among us.

There are uſually two caimacans, one reſiding at Conſtantinople, as governor thereof; the other attending the grand vizir, in quality of his lieutenant, ſecetary of ſtate, and firſt miniſter of his council; and gives audience to embaſſadors. Sometimes there is a third caimacan, who attends the ſultan; whom he acquaints with any public diſturbances, and receives his orders concerning them.

CAIMAN, or CAIMAN-ISLANDS, certain american iſlands lying ſouth of Cuba, and north-weſt of Jamaica, between 81° and 86° of weſt longitude, and in 21° of north latitude.

They are moſt remarkable on account of the fiſhery of tortoiſe, which the people of Jamaica catch here, and carry home alive, keeping them in pens for food, and killing them as they want them.

CAINIANS, or CAINITES, in church-hiſtory, chriſtian heretics, that ſprung up about the year 130, and took their name from Cain, whom they looked upon as their head and father: they ſaid that he was formed by a celeſtial and almighty power,

power, and that Abel was made but by a weak one.

This ſect adopted all that was impure in the hereſy of the gnoſtics, and other heretics of thoſe times: they acknowledged a power ſuperior to that of the creator; the former they called wiſdom, the latter, inferior virtue: they had a particular veneration for Korah, Abiram, Eſau, Lot, the ſodomites, and eſpecially Judas, becauſe his treachery occaſioned the death of Jeſus Chriſt: they even made uſe of a goſpel, which bore that falſe apoſtle's name.

CAIRO, or GRAND CAIRO, the capital of Egypt, ſituated in a plain at the foot of a mountain, about two miles eaſt of the Nile, and 100 miles ſouth of the mouth of that river: eaſt longitude 32°, north latitude 30°.

The town is ten miles in circumference, and full of inhabitants. The caſtle ſtands on the ſummit of a hill, at the ſouth end of the town, and is three miles round. The britiſh and other european ſtates have their conſuls and factors here, for the protection of trade.

CAIROAN, a town of the kingdom of Tunis, in Africa, ſituated on the river Magrida, about eighty miles ſouth of Tunis; eaſt long. 9°, north lat. 36°.

CAISSON, in the military art, a wooden cheſt, into which ſeveral bombs are put, and ſometimes only filled with gunpowder: this is buried under ſome work, whereof the enemy intends to poſſeſs themſelves, and when they are maſters of it, is fired, in order to blow them up.

CAISSON is alſo uſed for a wooden frame, or cheſt, uſed in laying the foundations of the piers of a bridge.

CAITHNESS. See the article CATHNESS.

CAKE, a finer ſort of bread, denominated from its flat round figure. See the article BREAD.

We meet with divers compoſitions under the name of cakes; as ſeed-cakes, made of flour, butter, cream, ſugar, coriander and caraway ſeeds, mace, and other ſpices and perfumes, baked in the oven; plumb-cake, made much after the ſame manner, only with fewer ſeeds, and the addition of currants; pan-cakes, made of a mixture of flour, eggs, &c. fried; cheeſe-cakes, made of cream, eggs, and flour, with, or without cheeſe-curd, butter, almonds, &c. oat-cakes, made of fine oaten-flour, mixed with yeſt, rolled thin, and laid on an iron or ſtone to bake over a ſlow fire; ſugar-cakes, made of fine ſugar beaten and ſearced with the fineſt flour, adding butter, roſe-water, and ſpices: roſe-cakes, placentæ roſaceæ, are leaves of roſes dried and preſſed into a maſs, ſold in the ſhops for epithems.

CALABASH, in commerce, a light kind of veſſel made of the ſhell of a gourd, emptied and dried, ſerving for a caſe to put divers kinds of goods in; as pitch, roſin, and the like. The Indians alſo, both of the north and ſouth ſea, put the pearls they have fiſhed in calabaſhes; and the negroes, on the coaſt of Africa, do the ſame by their gold duſt. The ſmaller calabaſhes are alſo frequently uſed by theſe people as a meaſure, by which they ſell theſe precious commodities to the Europeans. The ſame veſſels likewiſe ſerve for putting in liquors; and do the office of the cups as well as of bottles for ſoldiers, pilgrims, &c.

CALABRIA, the moſt ſoutherly part of the kingdom of Naples, ſituated over-againſt Sicily.

There are two provinces of Calabria, called the hither and farther Calabria, with reſpect to the city of Naples; Coſenza being the capital of the former, and Rheggio of the latter.

CALADE, in the manege, the deſcent or ſloping declivity of a riſing manege ground, being a ſmall eminence upon which we ride down a horſe ſeveral times, putting him to a ſhort gallop, with his forehams in the air, to make him learn to ply or bend his haunches, and form his ſtop upon the aids of the calves of the legs, the ſtay of the bridle, and the caveſon, ſeaſonably given.

CALAHORRA, a city of old Caſtile, in Spain, ſituated on the river Ebro, near the confines of Navarre, about ſixty miles north-weſt of Saragoſſa; weſt longitude 2°, north lat. 42° 20'.

CALAIS, a port-town of Picardy, in France, ſituated on the engliſh channel, about twenty-two miles ſouth-eaſt of Dover; eaſt long. 2°, north latit. 51°.

CALAMANCO, a ſort of woolen ſtuff manufactured in England and in Brabant. It has a fine gloſs, and is chequered in the warp, whence the checks appear only on the right ſide. Some calamancoes are quite plain, others have broad ſtripes adorned with flowers; ſome with plain broad ſtripes, ſome with narrow ſtripes, and others watered.

CALAMINARIS, or LAPIS CALAMINARIS, in natural hiſtory, a kind of foſſil, the general ore of zinc in ſpun-

gy

gy ſubſtance, and a lax and cavernous texture, yet conſiderably heavy.

It is of no determinate ſhape or ſize, but is found in maſſes of a very various and irregular figure. It is, when moſt pure and perfect, of a pale browniſh grey. It is found in Germany, Saxony, Bohemia, and England.

The great uſe of the lapis calaminaris is the mixing with copper, for the making of braſs: this change it makes in copper, is wholly in virtue of the zinc it contains; which zinc, when ſeparated, will do the ſame. See BRASS and ZINC.

Lapis calaminaris is much uſed in medicine externally, not only in collyriums for the eyes, but as a deſiccative for weeping ulcers, and for preventing excoriations in children. It has indeed been made more famous than it deſerves in one particular inſtance, that of its virtue againſt burns: it is on this account made the principal ingredient in a cerate, called, from its pretended inventor, Turner's cerate.

Calamine ſhould be choſen for medicinal uſes, the heavieſt, ſofteſt, and moſt friable that can be got, and ſuch as is the leaſt debaſed by other ſubſtances.

CALAMINE, CALAMINARIS. See the laſt article.

CALAMINT, in botany, a ſpecies of meliſſa. See the article MELISSA.

Calamint is eſteemed a good aperient and diaphoretic.

CALAMUS, in botany, a genus of the hexandria-monogynia claſs of plants, the calyx of which is a permanent perianthium, conſiſting of ſix leaves; there is no corolla: the fruit is membranaceous and globoſe, containing one cell, in which is a globoſe fleſhy ſeed.

CALAMUS AROMATICUS, in the materia medica, the ſtalk of a ſpecies of acorus, met with in pieces of ten or twelve inches long, and from the thickneſs of a gooſe quill, down to that of a wheaten ſtraw. It is full of knots, or joints, in the manner of our common reeds, and is hollow, of a pale colour, very light, and eaſily broken: its cavity is filled up with a ſoft and ſpungy medullary ſubſtance, of a white colour, very light, and reſembling a congeries of cobwebs.

The whole is of an agreeable aromatic ſmell, when freſh broken, and is evidently the drug which the antients meant by the name of calamus aromaticus. The Indians uſe it in their ſauces, and eſteem it cordial and ſtomachic: it is ſaid to be a diuretic and a promoter of the menſes: the fume of it, burnt with turpentine, is recommended for diſeaſes of the breaſt: the indian women, according to ſome, uſe it as an uterine and cephalic: with us, it is only known as an ingredient in the theriaca; and is ſeldom to be met with in ſhops, the common acorus being generally uſed in its place; whence that root is called by the name of calamus aromaticus, but very improperly, for which reaſon, the true plant is diſtinguiſhed by the name of calamus aromaticus verus. See the article ACORUS.

CALAMUS-SCRIPTORIUS, in antiquity, a reed, or ruſh, to write with.

The antients made uſe of ſtyles to write on tables covered with wax; and of reed, or ruſh, to write on parchment, or egyptian paper.

CALAMUS-SCRIPTORIUS, in anatomy, a dilatation of the fourth ventricle of the brain, ſo called from its figure, which reſembles that of a gooſe-quill. See the article BRAIN.

CALASH, or CALESH, a light and very low kind of chariot, uſed chiefly for taking the air in parks and gardens.

CALASIRIS, in antiquity, a linen tunic fringed at the bottom, and worn by the Egyptians under a white woolen garment; but this laſt they were obliged to pull off when they entered the temples, being only allowed to appear then in linen habits.

CALATAJUD, a city of Arragon, in Spain, ſituated on the river Xalo, about fifty miles weſt of Saragoſſa; weſt longitude 2° 5′, north latitude 41° 15′.

CALATHUS, in antiquity, a baſket, hamper, or pannier of oſiers, reeds, or twigs, for women to put their work in, or to gather flowers in.

Calathus was alſo a veſſel, or pan, for cheeſe-curds and milk; alſo the name of a cup for wine, uſed in ſacrifices.

CALATOR, in antiquity, was a public ſervant, and a freeman, ſuch as a bailiff or crier, a ſumner to ſummon courts, ſynods, and other public aſſemblies.

CALATRAVA, a city of new Caſtile, in Spain, ſituated on the river Guadiana, forty-five miles ſouth of Toledo; weſt long. 4° 20′, north latit. 39°.

Knights of CALATRAVA, a military order in Spain, inſtituted under Sancho III. king of Caſtile, upon the following occaſion. When that prince took the ſtrong fort of Calatrava from the moors of Andaluſia, he gave it to the templars, who, wanting courage to defend it, returned it him again. Then Don Reymond, of the order of the Ciſtercians, accompanied with

with ſeveral perſons of quality, made an offer to defend the place, which the king thereupon delivered up to them, and inſtituted that order. It increaſed ſo much under the reign of Alphonſus, that the knights deſired they might have a grand maſter, which was granted. Ferdinand and Iſabella afterwards, with the conſent of pope Innocent VIII. reunited the grand maſterſhip of Calatrava to the ſpaniſh crown; ſo that the kings of Spain are now become perpetual adminiſtrators thereof.

The knights of Calatrava bear a croſs gules, fleurdeliſed with green, *&c.* their rule and habit was originally that of the Ciſtercians.

CALCADA, or St. DOMINGO DE CALCADA, a city of old Caſtile, in Spain, forty-eight miles eaſt of Burgos; weſt longitude 3°, north latitude 42° 36′.

CALCANEUM, or OS CALCIS, in anatomy, the bone lying under the aſtragalus, to which, and the os cuboides, it is articulated. Its apophyſis behind, ſerves to prevent our falling backward, and on its poſterior ſurface is inſerted the tendo achillis; in its interior ſide there is an excavation, intended to give ſafe paſſage to the veſſels running to the metatarſus and toes.

CALCANTHUM, or CHALCANTHUM. See the article CHALCANTHA.

CALCAR, in anatomy, the ſame with *calcaneum*. See the article CALCANEUM.

CALCAR, in glaſs making, a ſort of oven, or reverberatory furnace, in which being well heated, the cryſtal frit, or bollito, is made.

This furnace is made in the faſhion of an oven, ten feet long, ſeven broad in the wideſt part, and two feet deep. On one ſide of it is a trench ſix inches ſquare, the upper part of which is level with the calcar, and ſeparated only from it at the mouth, by bricks nine inches wide. Into this trench they put ſea coal, the flame of which is carried into every part of the furnace, and is reverberated from the roof upon the frit, over the ſurface of which, the ſmoak flies very black, and goes out at the mouth of the calcar; the coals burn on iron grates, and the aſhes fall through. See the article GLASS.

CALCAR, in geography, a town of the dutchy of Cleves, and circle of Weſtphalia, in Germany; eaſt longitude 5° 50′, and north latitude 51° 45′.

CALCARIOUS, in general, denotes ſomething belonging to, or partaking of the nature of calx. See the article CALX.

CALCEDON, or CHALCEDON, in geography, a city of Bythinia, in the leſſer Aſia, once the capital of the country, ſtood on the aſian ſide of the Boſphorus, or ſtrait of Conſtantinople, oppoſite to that city, and near the place where the ſeraglio or palace of Scutari now ſtands. It is now dwindled into a village, and is ſituated in eaſt longitude 29°, north latitude 41° 30′.

CALCEDON, among jewellers, denotes a flaw or foul vein, like chalcedony, found in ſome precious ſtones.

CALCEDONY, or CHALCEDONY, in the hiſtory of precious ſtones. See the article CHALCEDONY.

CALCINATION, in chemiſtry, ſuch a management of bodies by fire, as renders them reducible to a calx, or white powder; for which reaſon it is termed chemical pulverization.

With regard to its object, calcination reſpects not ſo much the diſſipation of the volatile parts, although that be an effect it very often produces, as the comminution, or, at leaſt, the ſoftening of a body. And as ſolid bodies are reducible to a powder by many different operations, hence we find, in chemical writers, the terms of calcination by a dry way, calcination by moiſture, and philoſophical calcination. The firſt method, however, alone, is, properly ſpeaking, called calcination.

Calcination includes alſo the ſolution of metalline bodies by corroſive ſubſtances.

Calcination, according to Dr. Freind, who attempts to ſolve its phænomena from certain lemmata proved by geometrical writers, and particularly by Sir Iſaac Newton, and Dr. Keil, is the effect of liquefaction continued, wherein the more volatile corpuſcles fly off, and the particles of the fire enter the body in ſuch plenty, and immediately mix themſelves therewith, that it can no longer appear in the form of a fluid; and hence, ſays he, the weight of the calcined body is increaſed; and vitrification is no more than a degree of calcination: as common glaſs is made by a continued fuſion, which throws off the lighter and more droſſy particles. Hence the gravity of the glaſs exceeds that of the materials of which it is compoſed.

CALCIS OS, in anatomy. See the article CALCINEUM.

CALCULARY, in a pear, a congeries of ſtony

ſtony concretions, ſometimes found in the ſubſtance of that fruit.

The calculary is a diſtemperature to which ſome kinds of pear are very liable.

CALCULATION, the act of computing ſeveral ſums, by adding, ſubtracting, multiplying, or dividing. See the articles ARITHMETIC, ADDITION, &c.

Several people of Africa, America, and Aſia calculate by means of cords, upon which they tie knots.

An error in calculation is never protected or ſecured by any ſentence, decree, &c. for in ſtating accounts it is always underſtood that errors of calculation are excepted.

CALCULATION is more particularly uſed to ſignify the computations in aſtronomy and geometry, for making tables of logarithms, ephemerides, finding the time of eclipſes, &c.

CALCULATION *of clock and watch work*. See CLOCK and WATCH.

CALCULUS, in natural hiſtory, properly denotes a little ſtone or pebble. See the article PEBBLES.

CALCULUS, or CALCULUS HUMANUS, in medicine, the ſtone in the bladder or kidneys. See the article STONE.

CALCULUS alſo denotes a method of computation, ſo called from the calculi, or counters, antiently uſed for this purpoſe. Hence,

CALCULUS SPECIALIS, or LITERALIS, is the ſame with algebra. See ALGEBRA.

CALCULUS DIFFERENTIALIS is a method of differencing quantities, that is, of finding an infinitely ſmall quantity, which being taken an infinite number of times, ſhall be equal to a given quantity. An infinitely ſmall quantity, or infiniteſimal is a portion of a quantity leſs than any aſſignable one; it is therefore accounted as nothing: and hence two quantities only differing by an infiniteſimal, are reputed equal. The word infiniteſimal is merely reſpective, and implies a relation to another quantity: for example, in aſtronomy, the diameter of the earth is an infiniteſimal in reſpect of the diſtance of the fixed ſtars. It muſt not, then, be confounded with any real ens, or being.

Infiniteſimals are likewiſe called differentials, or differential quantities, when they are conſidered as the differences of two quantities. Sir Iſaac Newton calls them moments, conſidering them as momentary increments of quantities: for inſtance, of a line generated by the flux of a point, of a ſurface by the flux of a line, or of a ſolid by the flux of a ſurface. The calculus differentialis, therefore, and the doctrine of fluxions are the ſame thing, under different names, the latter given by Sir Iſaac Newton, and the former by Mr. Leibnitz, who diſputes with Sir Iſaac the honour of the diſcovery. There is, however, one difference between them, which conſiſts in the manner of expreſſing the differentials of quantities: Mr. Leibnitz, and moſt foreigners, expreſs them by the ſame letters as variable ones, prefixing only the letter d. Thus the differential of x is called dx, and the differential of y, dy. And dx is a poſitive quantity if x continually increaſe, and a negative quantity if x decreaſe. We, on the other hand, following Sir Iſaac Newton, inſtead of dx, write $\dot{x}$ (with a dot over it), and inſtead of dy, $\dot{y}$. But foreigners reckon this method not ſo commodious as the former, becauſe if differentials were to be differenced again, the dots would occaſion great confuſion; not to mention, that printers are more apt to overlook a point than a letter.

Now as permanent quantities are always expreſſed by the firſt letters of the alphabet, $da = 0$, $db = 0$, $dc = 0$; wherefore $d(x+y-a) = dx+dy$, and $d(x-y+a) = dx-dy$. The difference of quantities, then is eaſily performed by the addition or ſubtraction of their compounds. To difference two quantities that multiply each other, as xy, multiply the differential of one factor into the other factor, and the ſum of the two factors, is the differential required. Thus the differentials of xy will be $x\,dy+y\,dx$, that is $d(xy) = x\,dy+y\,dx$. Again, if there be three quantities mutually multiplying each other, the factum of the two muſt be multiplied into the differential of the third; thus ſuppoſe vxy: let $vx = t$, and vxy will be $= ty$; conſequently $d(vxy) = t\,dy+y\,dt$: but $dt = v\,dx+x\,dv$. If theſe values therefore are ſubſtituted in the antecedent differential $t\,dy+y\,dt$, it follows that $d(vxy) = vx\,dy+vy\,dx+xy\,dv$. In the ſame manner muſt we proceed when the quantities to be differenced are more than three. But if, while one variable quantity increaſes, the other, y, decreaſes, it is evident that $y\,dx-x\,dy$ will be the differential of xy.

The rule for differencing quantities that mutually divide each other, is firſt to multiply the differential of the diviſor in-

to the dividend, and on the contrary, the differential of the dividend into the divisor. 2. To ſubtract the firſt product from the laſt. 3. To divide the remainder by the ſquare of the diviſor, and the quotient is the differential of the quantities mutually dividing each other. For inſtance, let $xy:vz$ be to be differenced: ſuppoſe $xy=t$, and $vz=w$; then $xy:vz$ will be equal to $t:w$. But $d(t:w)=(w\,dt-t\,dw):w^2$; and $dt=x\,dy+y\,dx$, $dw=v\,dz+z\,dv$. Wherefore $d(t:w)=d(xy:vz)=(vzx\,dy+vzy\,dx-xyv\,dz-xyz\,dv):v^2z^2$. For a farther account of the doctrine of differentials, ſee the article FLUXIONS.

CALCULUS EXPONENTIALIS, among mathematicians, a method of differencing exponential quantities, and ſumming up the differentials of exponential quantities. By an exponential quantity is meant a power, the exponent of which is variable, as x^x, a^x. In order to difference an exponential quantity, nothing elſe is required than to reduce the exponential quantities to logarithmic ones, upon which the differencing is managed as in logarithmic ones. For inſtance, ſuppoſe the differential of the exponential quantity x^y were required,

Let $x^y=z$

then will $y\,lx=lz$

$$lx\,dy+y\,dx:x=dz:z$$

$$zlx\,dy+zy\,dx:x=dz$$

That is $x^y lx\,dy+yx^{y-1}dx=dz$. If the exponential quantity to be differenced be of the ſecond degree, as v^{x^y}, ſuppoſe as before $v^{x^y}=z$

then will $x^y lv=lz$

$$(x^y lx\,dy+yx^{y-1}dx)lv+x^y dv:v=dz:z$$

$$z(x^y lx\,dy+yx^{y-1}dx)lv+zx^y dv:v=dz$$

that is,

$$v^{x^y}(x^y lx\,dy+yx^{y-1}dx)lv+v^{x^y}v^{-1}x^y\,dv=dz$$

or,

$$v^{x^y}x^y lxlv\,dy+v^{x^y}yx^{y-1}lv\,dx+v^{x^y}v^{-1}x^y\,dv=dz$$

By the ſame method may be found the differential of an exponential quantity of any power. This calculus was invented by Mr. John Bernoulli, and is uſed in inveſtigating the properties of exponential curves. See *Exponential* CURVE.

CALCULUS INTEGRALIS, or SUMMATORIUS, is a method of ſumming up differential quanties; that is, from a differential quantity given, to find the quantity from whoſe differencing the given differential reſults.

It is the inverſe of the calculus differentialis; whence the Engliſh, who uſually call the differential method fluxions, give this calculus, which aſcends from the fluxions to the flowing quantities, or, as Wolfius and other foreigners expreſs it, from the differences to the ſums, the name of the inverſe method of fluxions. See the articles FLUENT and FLUXION. Let s be the ſign of the ſum, or integral quantity, ſo that $s\,y\,dx$ may denote the integral of the differential $y\,dx$. To integrate or ſum up a differential quantity, 1. It is demonſtrated that $s\,dx=x$. 2°. $s(dx\mp dy)=x\mp y$. 3°. $s(x\,dy+y\,dx)=xy$. 4°. $s\,m\,x^{m-1}dx=x^m$. 5°. $s(n:m)\,x^{(n-m):m}dx=x^{n:m}$. 6°. $s(y\,dx-x\,dy):y^2=x:y$. Of theſe the fourth and fifth caſes occur moſt frequently, in which the differential quantity is integrated, if a variable unity is added to the exponent, and the ſum divided by the new exponent, multiplied into the differential of the root, as in the fourth caſe by $(m-1+1)\,dx$, that is, by $m\,dx$.

If the differential quantity to be integrated, do not come under any of theſe formulas, it muſt either be reduced to an integrable finite, or an infinite ſeries each of whoſe terms may be ſummed.

This calculus is applied to geometry, in the quadrature and rectification of curves, in cubing ſolids and meaſuring their ſurfaces, in the inverſe method of tangents, and in the doctrine of logarithms.

It may be remarked, that as in the analyſis of finites, any quantity may be raiſed to any given power; but, *vice verſa*, the root cannot be extracted out of any number required: ſo in the analyſis of infinites, any variable or flowing quantity may be differenced; but, *vice verſa*, any differential cannot be integrated. And as in the analyſis of finites, we are not yet arrived at a method of extracting roots of all equations, ſo neither has the integral calculus arrived at perfection: and as in the former we are obliged to have reſourſe to approximation, ſo in the latter

latter we have recourſe to infinite ſeries, when we cannot attain to a perfect integration. See the article SERIES.

CALDARIUM, in the antient baths, a certain vault, or room, made ſo as to collect the vapours, and produce ſweating: whence it ſignifies a hot-houſe, bagnio, ſtove, or ſweating-room.

CALEFACTION, the production of heat in a body from the action of fire, or that impulſe impreſſed by a hot body upon other bodies about it. This word is uſed in pharmacy, by way of diſtinction from coction, which implies boiling; whereas calefaction is only heating a thing.

CALENBURG-CASTLE, the capital of a dutchy of the ſame name, in lower Saxony, in Germany, ſituated upon the river Leine, about fifteen miles ſouth of Hanover: eaſt longit. 9° 40′, and north lat. 52° 20′.

CALENDAR, *calendarium*, a diſtribution of time, accommodated to the various uſes of life, but more eſpecially ſuch as regard civil and eccleſiaſtical polity; in which ſenſe it differs nothing from the modern almanacs. See ALMANAC.

The firſt calender was made by Romulus, who divided the year into ten months only, beginning on the firſt day of March, and containing 304 days, in which time he imagined the ſun performed his courſe through all the ſeaſons.

This calendar was reformed by Numa Pompilius, who added two months more, *viz.* January and February, placing them before March: his year began on the firſt of January; and conſiſted of 355 days. This was afterwards improved by Julius Cæſar, and was by him called the julian account, which reduced the year to 365 days, 6 hours; and was retained in moſt proteſtant countries, and in our nation till the year 1752. This year is diſpoſed into quadriennial periods, whereof the three firſt years, which were called commons, conſiſted of 365 days, and the fourth biſſextile, of 366. See the article BISSEXTILE.

The julian account was afterwards corrected by pope Gregory XIII. which on that account obtained the name of the gregorian calendar, or new ſtile, the julian being called the old ſtile: and tho' the gregorian calendar be preferable to the julian, yet it is not without its defects: perhaps, as Tycho Brahe and Caſſini imagine, it is impoſſible ever to bring the year to a perfect juſtneſs. For an account of the difference of theſe computations, ſee the article BISSEXTILE.

Julian chriſtian CALENDAR, that wherein the days of the week are determined by the letters A, B, C, D, E, F, G, by means of the ſolar cycle; and the new and full moons, eſpecially the paſchal full moon, with the feaſt of eaſter, and the other moveable feaſts depending thereon, by means of golden numbers rightly diſpoſed through the julian year. See the articles CYCLE, DOMINICAL LETTER, and GOLDEN NUMBER.

Gregorian CALENDAR, that which, by means of epacts rightly diſpoſed, through the ſeveral months, determines the new and full moons, and the time of eaſter, with the moveable feaſts depending thereon, in the gregorian year. Therefore the gregorian calendar differs from the julian, both in the form of the year, and in that epacts are ſubſtituted inſtead of golden numbers. See the article EPACT.

Reformed, or *corrected* CALENDAR, that which, ſetting aſide golden numbers, epacts, and dominical letters, determines the equinox, with the paſchal full moon, and the moveable feaſts depending thereon, by aſtronomical computations, according to the rudolphine tables. This calendar was introduced among the proteſtant ſtates of Germany in the year 1700, when 11 days were, at once, thrown out of the month of February, by which means the corrected ſtile agrees with the gregorian.

CALENDAR *brothers*, *fratres calendarii*, a ſort of devout fraternities, compoſed of eccleſiaſtics as well as lay-men; whoſe chief buſineſs was to procure maſſes to be ſaid, and alms diſtributed, for the ſouls of ſuch members as were deceaſed. They alſo made laws and regulations for church diſcipline within their ſeveral diſtricts; which became of force by being confirmed by abbots or other prelates. They received legacies and donations of money, lands, &c. out of which they defrayed the charge of obits, wax-candles, and the like; what remained was ſpent in a collation in memory of the dead.

They were alſo denominated calend brothers, by reaſon they uſually met on the calends of each month, though in ſome places only once a quarter.

Aſtronomical CALENDAR, an inſtrument engraved upon copper-plates; printed on paper, and paſted on board, with a braſs ſlider which carries a hair, and ſhews by

inſpection, the ſun's meridian altitude, right aſcenſion, declination, riſing, ſetting, amplitude, &c. to a greater exactneſs than our common globes will ſhew.

CALENDER, a machine uſed in manufactories, to preſs certain woollen and ſilken ſtuffs, and linens, to make them ſmooth, even, and gloſſy, or to give them waves, or water them, as may be ſeen in mohairs and tabbies. This inſtrument is compoſed of two thick cylinders, or rollers, of very hard and poliſhed wood, round which the ſtuffs, to be calendered, are wound: theſe rollers are placed croſs-ways between two very thick boards, the lower ſerving as a fixed baſe, and the upper moveable, by means of a thick ſcrew, with a rope faſtened to a ſpindle, which makes its axis: the uppermoſt board is loaded with large ſtones cemented together, weighing 20000 lb, or more. It is this weight that gives the poliſh, and makes the waves on the ſtuffs about the rollers, by means of a ſhallow indenture or engraving cut in it.

At Paris they have an extraordinary machine of this kind, called the royal calender, made by order of M. Colbert; the lower table or plank of which is made of a block of ſmooth marble, and the upper lined at bottom with a plate of poliſhed copper.

There are alſo calenders without wheels, which are wrought by a horſe harneſſed to a wooden bar, which turns a large arbor placed upright; at the top of which, on a kind of lanthorn, is wound a rope, the two ends of which being faſtened to the two extremities of the upper plank of the engine, give it motion. But the horſe calender is in leſs eſteem than the wheel kind, as the motion of this latter is more equable and certain.

CALENDER alſo denotes the workman who manages the machine above deſcribed; applying the cloth or ſtuff underneath, after having firſt wound it on the rollers.

CALENDERS is alſo the name of a ſort of derviſes ſpread through Turky and Perſia, whoſe order is not in general eſteem among the Mahometans, as being reputed leſs abſtemious and ſtrict in morals than ſome other orders.

CALENDRING, the paſſing of cloths through the calender. See the article CALENDER.

We read of calendring worſteds. To improve linen farther, the drapers get ſeveral ſorts of their cloths calendred; whereby their threads are made to lie flatter and ſmoother. Houghton deſcribes calendring as performed by rolling the cloths on great wooden rollers, and laying them under a huge wooden box full of weighty materials, which is drawn by a horſe to and fro on ſeveral of theſe rollers.

CALENDS, *calendæ*, in roman chronology, the firſt day of each month, ſo called from the greek καλειν, to proclaim: it being cuſtomary, on thoſe days to proclaim the number of holy-days in each month.

The calends were reckoned backwards, or in a retrograde order: thus, the firſt of May begins the Calends of May; the 30th of April was the ſecond of the calends of May; the 29th, the third, &c. to the 13th where the ides commence; which are alſo numbered in a retrograde order to the 5th, where the nones begin, and theſe are numbered after the ſame manner to the firſt of the month, which is the calends of April. The rules of computation by calends are expreſſed in the following verſes:

Prima dies menſis cujuſque eſt dicta calendæ:
Sex Maius nonas, *Julius, October, & Mars*;
Quatuor at reliqui: habet idus *quilibet octo*;
Inde dies reliquos omnes dic eſſe calendas;
Quas retro numerans, dices a menſe ſequente.

Hence to find the day of our month anſwering to that of the calends, to the number of days in the preceding month add two, and from this ſum ſubtracting the number of calends given, the remainder will be the day of our month: thus the fourth of the calends of June is found to anſwer to the twenty-ninth of May: and ſo in other caſes. See the articles IDES and NONES.

CALENDULA, MARYGOLD, in botany, a genus of the polygamia-neceſſaria claſs of plants, the compound flower of which is radiated, and the particular hermaphrodite ones tubuloſe, and lightly divided into five ſegments of the length of the cup: there are no central ſeeds of the diſcus; thoſe of the periphery are ſometimes, though rarely, ſolitary; they are of a membranaceous ſubſtance, compreſſed and cordated.

This plant, among phyſicians, paſſes for alexipharmic and hyſteric.

CALENTES, in logics, a ſort of ſyllogiſm in the fourth, commonly called galenical, figure, wherein the major propoſition is univerſal and affirmative; and the

the ſecond or minor, as well as the concluſion, univerſal and negative.

This is intimated by the letters it is compoſed of, where the A ſignifies an univerſal affirmative, and the two E's as many univerſal negatives. *Ex. gr.*

CA. Every affliction in this world is only for a time.

lEn. No affliction, which is only for a time, ought to diſturb us.

tEs. No affliction ought to diſturb us, which happens in this world.

The Ariſtotelians, not allowing the fourth figure of ſyllogiſms, turn this word into CElAntEs, and make it only an indirect mood of the firſt figure.

CALENTURE, *calentura*, in medicine, a feveriſh diſorder incident to ſailors in hot climates; the principal ſymptom of which is, their imagining the ſea to be green fields: hence, attempting to walk abroad in theſe imaginary places of delight, they are frequently loſt.

The cauſe of this ſymptom is generally ſuppoſed to be a plethora or viſcidity of the juices. The perſon thus affected has a fierce look, is very unruly, and at the ſame time ſo eager to get over-board to the imaginary green fields, and ſo ſtrong, that ſometimes ſix men are ſcarce ſufficient to detain him. The ſymptoms generally happen in the night-time, and ſeem to be moſt frequent about the Mediterranean, in the hot ſeaſon of the year, and affect chiefly the ſtrongeſt, thoſe that are young and of a ſanguine complexion. The pulſe here is ſometimes ſo low, that it can ſcarce be felt, though ſometimes it beats very ſtrong. The patient ſeldom complains of the uſual ſymptoms of a fever. After the ſtruggle is over, and the diſtemper abated, a ſoreneſs and heavineſs of the body are generally felt. The attack is uſually ſudden; if this diſtemper be taken in time, it ſeldom proves mortal.

The patient ought to be narrowly watched, for fear he ſhould fall over-board: reſt ſhould be encouraged: barley water with white wine is a proper drink: all malt liquors and ſpirits are prejudicial in general, a ſlender liquid diet is the moſt convenient. The firſt ſtep to be taken in the cure is, to bleed the patient; but it ſometimes happens in this caſe, that the veſſels are ſo full, and the juices ſo viſcid, that ſeveral veſſels muſt be opened, to obtain the deſired quantity of blood; for which reaſon the orifice ſhould be made pretty large.

CALF, *vitulus*, in zoology, the young of the ox-kind. See the article Bos.

Among ſportſmen, the term calf is uſed for a hart or hind of the firſt year: the ſame term is alſo uſed for the young of the whale.

There are two ways of breeding calves; one, when they are allowed to ſuck their dams all the year round, chiefly uſed in countries where paſture is cheap; and the other, when being taken from their dams after ſucking a fortnight, they are taught to drink milk, or milk and water, out of a tub. The former, however, of theſe methods is allowed to make the beſt cattle.

Sea-CALF, the engliſh name of the *phoca* of authors. See the article PHOCA.

CALF's-SNOUT, in botany, the name of the antirrhinum of botaniſts. See the article ANTIRRHINUM.

CALIBER, or CALIPER, properly denotes the diameter of any body: thus we ſay, two columns of the ſame caliber, the caliber of the bore of a gun, the caliber of a bullet, &c. See CANNON, &c.

CALIBER-COMPASSES, the name of an inſtrument, made either of wood, iron, ſteel, or braſs: that uſed for meaſuring bullets conſiſts of two branches, bending inwards, with a tongue fixed to one of them, and the other graduated in ſuch a manner, that if the bullet be compreſſed by the ends of the two branches, and the tongue be applied to the graduated branch, it will ſhew the weight of the bullet. See plate XXXV. fig. 3.

CALIBER alſo ſignifies an inſtrument uſed by carpenters, joiners, and bricklayers, to ſee whether their work be well ſquared.

CALICUT, a town ſituated on the Malabar-coaſt, in the hither peninſula of India, ſubject to its own prince; eaſt longitude 75°, and north latitude 11° 20′.

This was the firſt port the Portugueſe made in India, after ſailing round the cape of Good-hope.

CALIDUCTS, in antiquity, a kind of pipes, or canals, diſpoſed along the walls of houſes and apartments, uſed, by the antients, for conveying heat to ſeveral remote parts of the houſe, from one common ſurface.

CALIGA, in roman antiquity, was the proper ſoldier's ſhoe, made in the ſandal-faſhion, without upper-leather to cover the ſuperior part of the foot, though otherwiſe reaching to the middle of the leg, and faſtened with thongs. The ſole of the caliga was of wood, like the ſabot

of

of the french peasants, and its bottom stuck full of nails, which clavi are supposed to have been very long in the shoes of the scouts and sentinels; whence these were called by way of distinction, caligæ speculatoriæ, as if, by mounting the wearer to a higher pitch, they gave a greater advantage to the sight. The others will have the caligæ speculatoriæ to have been made soft and woolly, to prevent their making a noise.

CALIPH, the supreme ecclesiastical dignity among the Saracens; or, as it is otherwise defined, a sovereign dignity among the mahometans, vested with absolute authority in all matters relating both to religion and policy.

It signifies in the arabic, successor or vicar: the saracen princes assumed this title as descendants from Mahomet; the caliphs bearing the same relation to Mahomet, that the popes pretend they do to Jesus Christ, or St. Peter. It is at this day one of the grand signior's titles, as successor of Mahomet; and of the sophi of Persia, as successor of Ali.

CALIPHATE, the dignity or office of caliph. See the preceding article.

CALIPPIC PERIOD, an improvement of the cycle of Meton, of nineteen years, which Calippus, a famous grecian astronomer, finding in reality to contain nineteen of Nabonassar's years, four days, and $\frac{331}{4\,5\,6}$, he, to avoid fractions, quadrupled the golden number, and by that means made a new cycle of seventy-six years; which time being expired, he supposed the lunation, or changes of the moon, would happen on the same day of the month, and hour of the day, that they were on seventy-six years before.

It is, however, demonstrated, that the calippic period itself is not accurate; that it does not bring the new and full moons precisely to their places; but brings them too late, by a whole day in 553 years. See the article CYCLE.

CALIXTINS, in church-history, a sect of christians, in Bohemia and Moravia: the principal point in which they differed from the church, was the use of the chalice, or communicating in both kinds.

CALIXTINS, is also a name given to those, among the lutherans, who follow the sentiments of George Calixtus, a celebrated divine, who opposed the opinion of St. Augustine, on predestination, grace, and free-will.

CALKING, or CALQUING. See the article CALQUING.

CALKINS, the prominent parts at the extremities of a horse-shoe, bent downwards, and forged to a sort of point.

Calkins are apt to make horses trip; they also occasion blymes, and ruin the back sinews. If fashioned in form of a hare's ear, and the horn of a horse's heel be pared a little low, they do little damage; whereas the great square calkins quite spoil the foot.

Calkins are either single or double, that is, at one end of the shoe, or at both: these last are deemed less hurtful, as the horse can tread more even.

CALL, among hunters, a lesson blown upon the horn, to comfort the hounds.

CALLS, *natural and artificial*, among fowlers, a sport much practised during the wooing season of partridges, especially for taking cock-partridges; for which they put a hen into a cage, to call and bring them near. The hen-partridge should be set near a hedge, in a thin, open, wire-cage, so that she may be seen, at a good distance: then the net, called hallier, should be placed quite round the cage, each part about the distance of twenty feet: the fowler should retire behind the hedge.

Artificial CALLS are best made of box, walnut-tree, or the like: they are formed of the bigness of an hen's egg, bored thro' from end to end; about the middle there must be a hole hollowed within, to the bottom; then have a pipe of a swan's quill, and the bone of a cat's foot, opened at one end, which must be conveyed into the hole at the end, and so thrust into the hole at the middle; take afterwards a goose quill, opened at both ends, and put it in at the other end of the call; blow into the quill, and it will make the like noise as the partridge-cock does.

CALLA, in botany, a genus of the gynandria-polyandria class of plants, having no corolla; the fruits are berries of one cell each, containing many seeds of an oblong cylindrical figure, obtuse at both ends.

CALLAO, a port-town in a little island on the coast of Peru, in South America, opposite to Lima; west longitude 76°, and south latitude 12°.

CALLEN, a town of Ireland, in the county of Kilkenny, and province of Leinster, about ten miles south-west of Kilkenny; west longit. 7° 22′, and north latitude 52° 25′.

CALLICARPA, in botany, a genus of the tetrandria monogynia class of plants, the calyx

calyx of which is a perianthium, consisting of one campanulated leaf, divided into four segments at the edge; the corolla is expanded, and consists of one petal divided also into four segments; the fruit is a globose, smooth, berry, containing four oblong compressed callous seeds.

CALLICO, in commerce, a kind of linen manufacture, made of cotton, chiefly in the East-Indies, some of which are painted with various flowers of different colours; and others that are never dyed, having a stripe of gold and silver quite through the piece; and at each end they fix a tissue of gold, silver and silk, intermixed with flowers. This manufacture is brought hither by the East-India company, and is re-exported by merchants to other parts of Europe. The general wear of stained or printed india callicoes in this nation having become a general grievance, and occasioning unspeakable distress upon our own manufacturers, they were prohibited by stat. 7 Geo. I. cap. vii.

CALLIFORNIA, a large country of the West-Indies, lying between 116° and 238° west longitude, and between 23° and 46° north latitude. It is uncertain whether it be a peninsula or an island.

CALLIGONUM, in botany, a genus of the polyandria-digynia class of plants, having no flower; the fruit is an oval, compressed, striated, hairy pericarpium, with bifid tops, turning backwards; the seed is single.

CALLIGRAPHUS, in antiquity, a copist or scriviner, who transcribed, in a fair hand, what the notaries had taken down in notes, or minutes, being generally in a kind of cypher or short-hand, which, as they were in that hand, being understood by few, were copied over fair, and, at length, by persons who had a good hand, for sale, &c.

CALLING *the house*, in the british parliament, is the calling over all the members names, every one answering to his own, and going out of the house, in the order in which he is called; this they do, in order to discover whether there be any persons there, not returned by the clerk of the crown; or if any member be absent without leave of the house.

CALLIPÆDIA, Καλλιπαιδια, the art of getting or breeding fine and beautiful children.

We find divers rules and practices relating to this art, in antient and modern writers; among the magi, a sort of medicines called ermesia was prescribed to pregnant women, as a means of producing a beautiful issue. Of this kind were the kernels of pine nuts ground with honey, myrrh, saffron, palm wine, and milk. The Jews are said to have been so solicitous about the beauty of their children, that care was taken to have some very beautiful child (such as was Jochanan the disciple of Judah, author of the mischna) placed at the door of the public baths, that the women at going out being struck with his appearance, and retaining the idea, might all have children as fine as he. The Chinese take still greater care of their breeding women, to prevent uncouth objects of any kind from striking either their sense or imagination; musicians are retained to entertain them nightly with agreeable songs or odes, in which are set forth all the duties and comforts of the conjugal and domestic life; that the infant may take good impressions even before it is born, and not only come forth agreeably formed in body, but well disposed in mind.

Callipædia, nevertheless, seems to have been first erected into a just art by Claude Quillet de Chinon, a French abbot, who under the fictitious name of Calvidus Lætus, has published a fine latin poem, in four books, under the title of *callipædia, seu de pulchræ prolis habendæ ratione*; wherein are contained all the precepts of that new art.

CALLISTIA, in grecian antiquity, a lesbian festival, wherein the women presented themselves in Juno's temple, and the prize was assigned to the fairest. There was another of these contentions at the festival of Ceres Eleusinia, among the Parrhasians, and another among the Eleans, where the most beautiful man was presented with a complete suit of armour, which he consecrated to Minerva, to whose temple he walked in procession, being accompanied with his friends, who adorned him with ribbands, and crowned him with a garland of myrtle.

CALLITRICHE, in botany, a genus of the monandria digynia class of plants, without any calyx; the corolla consists of two incurved acuminated canaliculated, opposite petals; the fruit is a roundish four cornered compressed capsule, containing two cells; in each of which is a single oblong seed.

CALLOSUM CORPUS, in anatomy, a whitish hard substance, joining the two hemis-

hemiſpheres of the brain, and appears in view when the two hemiſpheres are drawn back. See the article BRAIN.

In this part Lanciſi and ſeveral others have ſuppoſed the ſoul particularly to reſide.

CALLUS, or CALLOSITY, in a general ſenſe, any cutaneous, corneous, or oſſeous hardneſs, whether natural or preternatural: but moſt frequently it means the callus generated about the edges of a fracture, provided by nature to preſerve the fractured bones, or divided parts, in the ſituation in which they are replaced by the ſurgeon.

A callus, in this laſt ſenſe, is a ſort of jelly, or liquid viſcous matter, that ſweats out from the ſmall arteries and bony fibres of the divided parts, and fills up the chinks, or cavities, between them. It firſt appears of a cartilaginous ſubſtance, but at length becomes quite bony, and joins the fractured part ſo firmly together, that the limb will often make greater reſiſtance to any external violence with this part, than with thoſe which were never broken.

But as the new fleſh in wounds will often ſprout up too faſt, ſo will the callus in fractures, and by this means render the limb uneven and deformed; the only meaſure to prevent this luxuriancy, is by making the bandage ſomewhat tighter than ordinary, and wetting it firſt with ſpirits of wine. When the callus is indurated, we have no medicine that will deſtroy it, or take it down: however, the emplaſtrum de ranis vigon. cum mercurio, tying a plate of lead over it, is preſcribed for taking it down.

CALLUS is alſo a hard, denſe, inſenſible knob, riſing on the hands, feet, &c. by much friction and preſſure againſt hard bodies.

CALM, in the ſea-language, is when there is no wind ſtirring.

That tract of ſea, to the northward of the equator, between 4° and 10° of latitude, lying between the meridians of Cape Verde, and of the eaſtermoſt iſland of that name, ſeems to be a place condemned to perpetual calms: the little winds that are being only ſome ſudden uncertain guſts of very ſmall continuance, and leſs extent. The Atlantic ocean, near the equator, is very much ſubject, nay always attended with theſe calms.

CALMAR, the capital of the province of Gothland, in Sweden, ſituated on the coaſt of the Baltic ſea, about forty miles north of Carelſcroon; eaſt longititude 16°, and north latitude 56° 40′.

CALMUCKS, certain wandering tribes or hords of Tartars, inhabiting the country north of the Caſpian ſea, under the protection of Ruſſia.

CALNE, a borough-town of Wiltſhire, about twenty miles north of Saliſbury, which ſends two members to parliament; weſt longit. 2°, and north lat. 51° 30′.

CALOGERI, in church-hiſtory, monks of the greek church, divided into three degrees, the novices, called archari; the ordinary profeſſed, called microchemi; and the more perfect, called megalochemi: they are likewiſe divided into cœnobites, anchorets, and recluſes. The cœnobites are employed in reciting their office from midnight to ſunſet, they are obliged to make three genuflexions at the door of the choir; and returning, to bow to the right and to the left, to their brethren. The anchorets retire from the converſation of the world, and live in hermitages, in the neighbourhood of the monaſteries; they cultivate a little ſpot of ground, and never go out but on ſundays and holy days, to perform their devotions at the next monaſtery. As for the recluſe, they ſhut themſelves up in grottos and caverns, on the tops of mountains, which they never go out of, abandoning themſelves entirely to providence; they live on the alms ſent them by the neighbouring monaſteries.

CALOMEL, in the materia medica, a name given to mercurius dulcis, ſublimated ſix times; the preparation is done thus.

Take corroſive ſublimate a pound, purified mercury nine ounces; add the quickſilver to the mercury, reduce to powder, and digeſt them together in a glaſs matraſs, in a gentle ſand heat, frequently ſhaking the veſſel, till the whole is united: when they are thus mixed, increaſe the heat, ſo as to ſublimate the whole; take out the ſublimate, and ſcrape off an acrid part that is found at the top of it; and if any globules of mercury appear, ſeparate them alſo; let the ſublimation be repeated ſix times. It is a gentle purgative, and a very noble attenuant. It is the greateſt of all medicines againſt worms, and is now the general remedy in a gonorrhœa. The common method of giving it is in a bolus, over night, ten or twelve grains for a doſe, and a purging draught the next morning, &c. Rubbed with an equal quantity of ſul-

phur antimonii auratum, it is recommended as a powerful and ſafe alterative.

CALOPHYLLUM, in botany, a genus of the polyandria-monogynia claſs of plants, whoſe corolla conſiſts of four roundiſh, hollow, patent petals, and is larger than the cup: the fruit is a large globoſe drupe, with only one cell: the ſeed is a large, ſingle, globoſe, acuminated nut.

CALOTTE, a cap or coif of hair, ſatin, or other ſtuff: an eccleſiaſtical ornament in moſt popiſh countries. See CAP.

CALOTTE, in architecture, a round cavity or depreſſure, in form of a cap or cup, lathed and plaſtered, uſed to diminiſh the riſe or elevation of a moderate chapel, cabinet, alcove, &c. which, without ſuch an expedient, would be too high for other pieces of the apartment.

CALPE, the mountain, at the foot of which, towards the ſea, Gibraltar ſtands. It is half a league in height towards the land, and ſo ſteep, that there is no approaching it on that ſide.

CALQUING, or CALKING, a term uſed in painting, &c. where the backſide of any deſign is covered with a black or red colour, and the ſtrokes, or lines, traced through, on a waxed plate, wall, or other matter, by paſſing lightly over each ſtroke of the deſign, with a point, which leaves an impreſſion of the colour on the plate or wall.

CALTHA, MARSH-MARYGOLD, in botany, a genus of the polyandria-polygynia claſs of plants; the flower of which conſiſts of five large, oval, plane, patent, deciduous petals: the fruit is ſhort, acuminated, patent, bicarinated, and open at the upper ſuture; the ſeeds are numerous and roundiſh, and adhere to the upper ſuture.

CALTROP, in military affairs, an inſtrument with four iron points, diſpoſed in a triangular form, ſo that three of them are always on the ground, and the fourth in the air. They are ſcattered over the ground where the enemy's cavalry is to paſs, in order to embaraſs them.

CALTROP, in botany, the engliſh name of the *tribulus* of botaniſts. See the article TRIBULUS.

CALVARIA, in anatomy, the hairy ſcalp, or upper part of the head, which, either by diſeaſe, or old age, grows bald firſt. See the articles HEAD and CALVITIES.

CALVARY, a term uſed in popiſh countries, for a ſort of chapel of devotion, raiſed on a little hill near the city, in memory of the place where Jeſus Chriſt was crucified, near Jeruſalem.

CALVARY, in heraldry, a croſs ſo called, becauſe it reſembles the croſs on which our Saviour ſuffered. It is always ſet upon ſteps. See plate XXXV. fig. 4.

CALVI, a town of the province of Lavoro, in the kingdom of Naples, ſituated near the ſea, about fifteen miles north of the city of Naples; eaſt longit. 14° 45′, and north latitude 41° 15′.

CALVI is alſo the name of a ſea-port in the iſland of Corſica, ſituated on a bay, on the weſt ſide of the iſland, about forty miles ſouth-weſt of Baſtia; eaſt longit. 9° 5′, and north lat. 42° 16′.

CALVINISTS, in church-hiſtory, thoſe who follow the opinions of John Calvin, one of the principal reformers of the church, in the XVIth century, a perſon of great parts and induſtry, and of conſiderable learning; whoſe doctrine ſtill ſubſiſts in its greateſt purity at Geneva, where it was firſt broached, and from whence it was propagated. This is the prevailing religion of the United Provinces. In England, it is confined among the diſſenters; and, in Scotland, it ſubſiſts in its utmoſt rigour.

The calviniſts are great advocates for the abſoluteneſs of God's decrees, and hold that election and reprobation depend on the mere will of God, without any regard to the merit or demerit of mankind; that he affords to the elect an irreſiſtible grace, a faith that they cannot loſe, which takes away the freedom of will, and neceſſitates all their actions to virtue.

The calviniſts believe that God foreknew a determinate number, whom he pitched upon to be perſons, in whom he would manifeſt his glory; and that having thus foreknown them, he predeſtinated them to be holy, in order to which he gives them an irreſiſtible grace, which makes it impoſſible for them to be otherwiſe.

CALVITIES, or CALVITIUM, in medicine, baldneſs, or a want of hair, particularly on the ſinciput, occaſioned by the moiſture of the head, which ſhould feed it, being dried up, by ſome diſeaſe, old age, or the immoderate uſe of powder, &c. See the article ALOPECIA.

CALUMET, a myſtic kind of pipe uſed by the american Indians, as the enſign of peace, and for religious fumigations. It is made of red, black, or white marble; the head reſembles our tobacco-pipes, but larger; and is fixed on a hollow reed, to hold it for ſmoaking: they adorn it with

rounds of feathers and locks of hair, or porcupines quills, and in it they ſmoke in honour of the ſun, eſpecially if they want fair weather, or rain. This pipe is a paſs and ſafe conduct amongſt all the allies of the nation who has it given: in all embaſſies the embaſſador carries it as an emblem of peace, and it always meets with a profound regard; for the ſavages are generally perſuaded, that a great misfortune would befal them, if they violated the public faith of the calumet.

CALX properly ſignifies lime, but is alſo uſed by chemiſts and phyſicians for a fine powder remaining after the calcination, or corroſion, of metals and other mineral ſubſtances. See CALCINATION.

CALX ANTIMONII is prepared of diaphoretic antimony, with three times its weight of nitre, and afterwards waſhed from its ſalts: it is ſaid to be a good diaphoretic.

Calx of tin is called putty; that of braſs, æs uſtum: and that of lead, ceruſs. See PUTTY, ÆS USTUM, and CERUSS.

CALX NATIVA, in natural hiſtory, a kind of marly earth, of a dead whitiſh colour, which, if thrown into water, makes a conſiderable bubbling and hiſſing noiſe, and has, without previous burning, the quality of making a cæment like lime, or plaſter of Paris.

CALX VIVA, QUICK LIME, that whereon no water has been caſt, in contradiſtinction to lime which has been ſlaked by pouring water on it.

CALX, in anatomy, the ſame with *calcaneum*. See the article CALCANEUM.

CALYCISTÆ, an appellation given by Linnæus to thoſe botaniſts, who have claſſed plants according to the different ſtructure of the calyx, or cup of the flower; ſuch was Magnolius.

CALYPTRA, among botaniſts, a thin membranaceous involucrum, uſually of a conic figure, which covers the parts of fructification. The capſules of moſt of the moſſes have calyptræ.

CALYX, among botaniſts, a general term expreſſing the cup of a flower, or that part of a plant which ſurrounds and ſupports the other parts of the flower.

The cups of flowers are very various in their ſtructure, and on that account diſtinguiſhed by ſeveral names, as perianthium, involucrum, ſpatha, gluma, &c. See the articles PERIANTHIUM, &c.

CAM, a river, antiently called Grant, which, riſing in Hertfordſhire, runs north-eaſt by Cambridge, and afterwards continues its courſe northwards, to the iſle of Ely, where it falls into the river Ouſe.

CAMÆA, in natural hiſtory, a genus of the ſemipellucid gems, approaching to the onyx ſtructure, being compoſed of zones, and formed on a cryſtalline baſis; but having their zones very broad and thick, and laid alternately on one another, with no common matter between; uſually leſs tranſparent, and more debaſed with earth, than the onyxes.

1. One ſpecies of the camæa is the dull-looking onyx, with broad black and white zones; and is the camæa of the moderns, and the arabian onyx: this ſpecies is found in Egypt, Arabia, Perſia, and the Eaſt-Indies. 2. Another ſpecies of the camæa is the dull, broad-zoned, green and white camæa, or the jaſpi-cameo of the Italians: it is found in the Eaſt-Indies, and in ſome parts of America. 3. The third is the hard camæa, with broad white and cheſnut-coloured veins. 4. The hard camæa, with bluiſh, white, and fleſh-coloured broad veins, being the ſardonyx of Pliny's time, only brought from the Eaſt-Indies.

CAMAIEU, or CAMEHUIA, in natural hiſtory, the ſame with camæa. See the preceding article.

This word is alſo uſed to expreſs a ſtone on which are found various figures and repreſentations of landſkips, &c. formed by a kind of luſus naturæ, ſo as to exhibit pictures without painting. It is likewiſe applied to any kind of gem on which figures are engraven, either indentedly or in relievo.

CAMAIEU, is alſo a term in painting, when there is only one colour, the lights and ſhades being of gold, or on a golden and azure ground. It is chiefly uſed to repreſent baſſo-relievos.

CAMALDULIANS, a religious order founded by St. Romauld, in a little plain, on the mount Apennine, called Camaldali, ſituated in the ſtate of Florence.

The manner of life firſt enjoined this order, was that they dwelt in ſeparate cells, and met together only at the time of prayer: ſome of them, during the two lents of the year, obſerved an inviolable ſilence; and others, for the ſpace of an hundred days. On Sundays and Thurſdays they fed on herbs, and the reſt of the week only on bread and water. Theſe conſtitutions were, however, a little moderated ſometime afterwards. This hermitage is now accounted very rich.

CAM-

CAMBAIA, a city of the province of Cambaia, or Guzarat, in the hither peninsula of India; it is a very large city, and had once a great trade, now removed to Surat; east longitude 72°, and north lat. 23° 30′.

CAMBER-BEAM, among builders, a piece of timber in an edifice, cut archwise, or with an obtuse angle in the middle, commonly used in platforms, as church-leads, and on other occasions where long and strong beams are required.

CAMBERED DECK, in ship-building, one that lies compassing, or higher in the middle than at either end; by no means fit for a ship of war.

CAMBLET, or CAMLET, a plain stuff, composed of a warp and woof, which is manufactured on a loom, with two treddles, as linens and flannins are.

There are camblets of several sorts, some of goat's hair, both in the warp and woof; others, in which the warp is of hair, and the woof half hair and half silk; others again, in which both the warp and the woof are of wool; and lastly, some, of which the warp is of wool and the woof of thread. Some are dyed in thread, others are dyed in the piece, others are marked or mixed; some are striped, some waved or watered, and some figured.

Camblets are proper for several uses, according to their different kinds and qualities; some serve to make garments both for men and women; some for bed curtains; others for houshold furniture, &c. See the article MOHAIR.

CAMBODIA, the capital of a kingdom of the same name in India, beyond the Ganges; east long. 104°, and north lat. 12° 30′.

The kingdom of Cambodia extends from 9° to 15° of north latitude, being bounded by the kingdom of Laos on the north, Cochin-china on the east, the indian ocean on the south, and by the bay of Siam on the west.

CAMBOGIA, in botany, a genus of the polyandria monogynia class of plants, the calyx of which is a perianthium, consisting of four roundish concave deciduous leaves, the corolla is made up of four roundish oblong concave petals, with oblong ungues; the fruit is a roundish octangular apple, containing eight cells, in which are lodged single oblong, kidney-shaped compressed seeds.

CAMBRAY, a city in the french Netherlands, situated on the river Schelde, near its source; east longitude 3° 15′, and north latitude 50° 15′.

It is a large and well built city, considerable for its linen manufacture, especially cambricks, which took their name from hence.

CAMBRICKS, a species of very fine white linen, made of flax at Cambray.

CAMBRIDGE, the capital of Cambridgeshire, situated upon the river Cam, about fifty-five miles north of London, and sixty north-east of Oxford; east longitude 5′, and north lat. 52° 15′.

Cambridge is most remarkable on account of its university, which consists of sixteen colleges, wherein are educated about fifteen hundred students. There are fourteen parishes in the town, which is said to contain about six thousand inhabitants.

New CAMBRIDGE, a town of New-England, about three miles west of Boston; likewise remarkable for an university, consisting of three colleges; west longit. 70° 4′, and north lat. 42°.

CAMEA, or CAMÆA, in natural history. See the article CAMÆA.

CAMEL, *camelus*, in zoology, a genus of quadrupeds, of the order of the *pecora*; distinguished from the rest by having no horns.

This genus comprehends the camel, properly so called, with two bunches on its back; the dromedary, or camel with a single bunch; the *glama*, or peruvian camel, with a gibbose breast and even back; and the *pacos*, or camel with no gibbosity at all.

The camel is larger than the dromedary, and covered with a fine fur, shorter as well as softer than that of the ox-kind: only about the bunches there grow hairs nearly a foot long. It is a native of Asia, particularly of Bactria, and makes an excellent beast of burden. See plate XXXV. fig. 6.

CAMELEON, or CHAMÆLEON, in zoology. See the article CHAMÆLEON.

CAMELFORD, a borough-town of Cornwall, about twenty miles west of Launceston; west longit. 5°, and north lat. 50° 40′.

It sends two members to parliament.

CAMELITA BOS, in zoology, a kind of wild bull, with a bunch on its back: probably the same with the *bison*.

CAMELLIA, in botany, a genus of the monadelphia-polyandria class of plants: the flower consists of five ovated petals, connected vertically at the base; the fruit is a turbinated, ligneose, and furrowed capsule; the seeds are numerous and small.

CAMELOPARDALIS, in zoology, a

ſpecies of cervus, with the ſimple horns and the forelegs very long. See CERVUS. This is one of the moſt extraordinary animals in the world; when it ſtands erect it meaſures to the head not leſs than ſixteen feet from the ground, and from the front of the noſe to the tail eighteen feet.

CAMELUS, the CAMEL, in zoology. See the article CAMEL.

CAMERA OBSCURA, in optics, a machine repreſenting an artificial eye, wherein the images of external objects are exhibited diſtinctly, in their native colours, either invertedly, or erect.

The camera obſcura, or darkened room, is made after two different methods; one is the camera obſcura, properly ſo called, that is, any large room made as dark as poſſible, ſo as to exclude all light, but that which is to paſs through the hole and lens in a ball, fixed in the window in the ſaid room.

The other is made in various forms, as that of a box, whoſe ſides fold out, *&c.* for the conveniency of carrying it from place to place.

Conſtruction of the CAMERA OBSCURA. For the conſtruction of a camera obſcura, 1. Darken the room E F (plate XXXV. fig. 7.) leaving only one little aperture open, in the window, at V, on the ſide I K, facing the proſpect A B C D. 2. In this aperture fit a lens, either plane convex or convex on both ſides. 3. At a due diſtance, to be determined by experience, ſpread a paper, or white cloth, unleſs there be a white wall for the purpoſe: then on this, G H, the deſired objects, A B C D, will be delineated invertedly. 4. If you would have them appear erect, place a concave lens between the center and the focus of the firſt lens; or receive the image on a plane ſpeculum, inclined to the horizon, under an angle of 45°; or by means of two lenſes included in a draw-tube, inſtead of one. If the aperture does not exceed the bigneſs of a pea, the objects will be repreſented without any lens at all.

For the conſtruction of a portable camera obſcura, the box, or cheſt, muſt be in breadth and length proportionable to the different magnitude of the diameter of the lens. In one of the ſides fix a lens, and white paper on an oppoſite glaſs, at a proper diſtance; and having made a little hole near the glaſs, you may, through that, ſee the images of the objects, in a beautiful manner, on the paper.

Philoſophy of the CAMERA OBSCURA. The following particulars are to be attended to in this philoſophical contrivance. Firſt, that the lens be extremely good, or free from any veins, blebs, *&c.* which may diſtort and blemiſh the picture. Secondly, that the lens be placed directly againſt the object whoſe picture you would have perfectly formed to contemplate, for, if the glaſs has any other poſition to the object, the image will be very imperfect, indiſtinct, and confuſed. Thirdly, care ought to be taken that the ball be ſufficiently large, and the frame in which it is placed not too thick, that ſo there may be ſufficient room for turning the ball every way to take in as many objects as poſſible, and to render the uſe thereof more complete. Fourthly, the lens ought to be of a juſt magnitude or aperture; for, if it be too ſmall, the image will be obſcure, and the minute parts not viſible at a diſtance for want of requiſite light. On the other hand, if the aperture be too large, the image will be confuſed, and become indiſtinct by too much light. Therefore, fifthly, if by experience we find that an aperture of two inches diameter is beſt for a lens of ſix feet focal diſtance, then the diameter of any other lens of a different focal diſtance, ought to be in the ſubduplicate ratio of ſix to the ſaid focal diſtance, that the object, or its image rather, may be equally bright and diſtinct in both. Sixthly, we ought not to attempt to exhibite a picture of objects in a dark room, unleſs the ſun ſhines upon, or ſtrongly illuminates the objects; for mere day-light is not ſufficient for this purpoſe, the greateſt beauty in this phænomenon being the exquiſite appearance and contraſts of lights and ſhadows, none of which can appear but from an object placed in the ſun-beams, without which every thing looks dark and dull, and makes a diſagreeable figure. Therefore, ſeventhly, the window or the ſide of the room where the ſcioptric ball is uſed, ought to look towards that quarter directly upon which the ſun ſhines, that ſo the illuminated ſides of objects may preſent themſelves to the lens, and appear more glorious in the picture. Eighthly, it is eaſy to infer, that the beſt time of the day for this experiment is about noon, becauſe the ſun-beams are ſtrongeſt, and of courſe the picture moſt luminous and diſtinct; alſo, that a north window

Fig. 1. CABLED, or CORDED CROSS.



Fig. 2. CACHRYS.



Fig. 3. CALIBER COMPASSES.

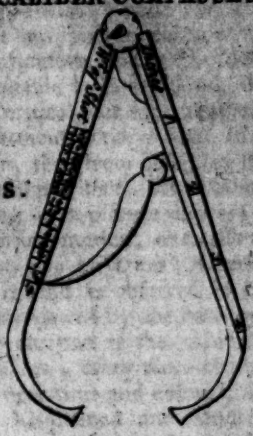


Fig. 4. CALVARY CROSS.



Fig. 5. CANCERES, *CRABS.*



N°. 1

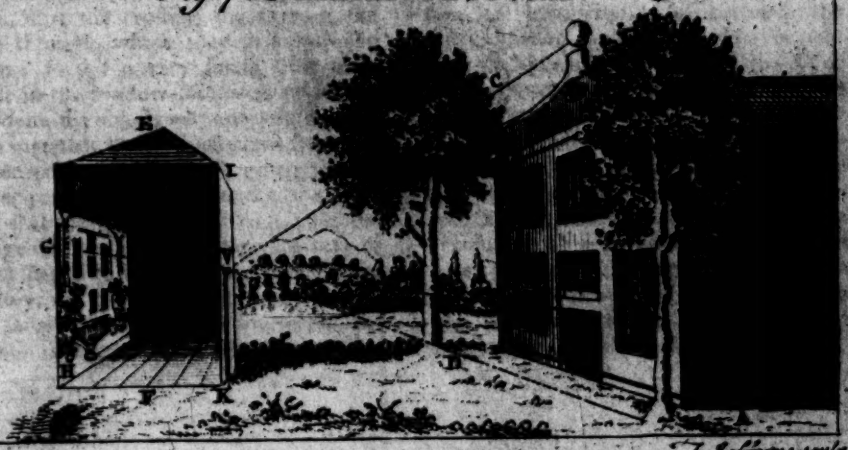
SPIDER-CRAB.

N°. 2

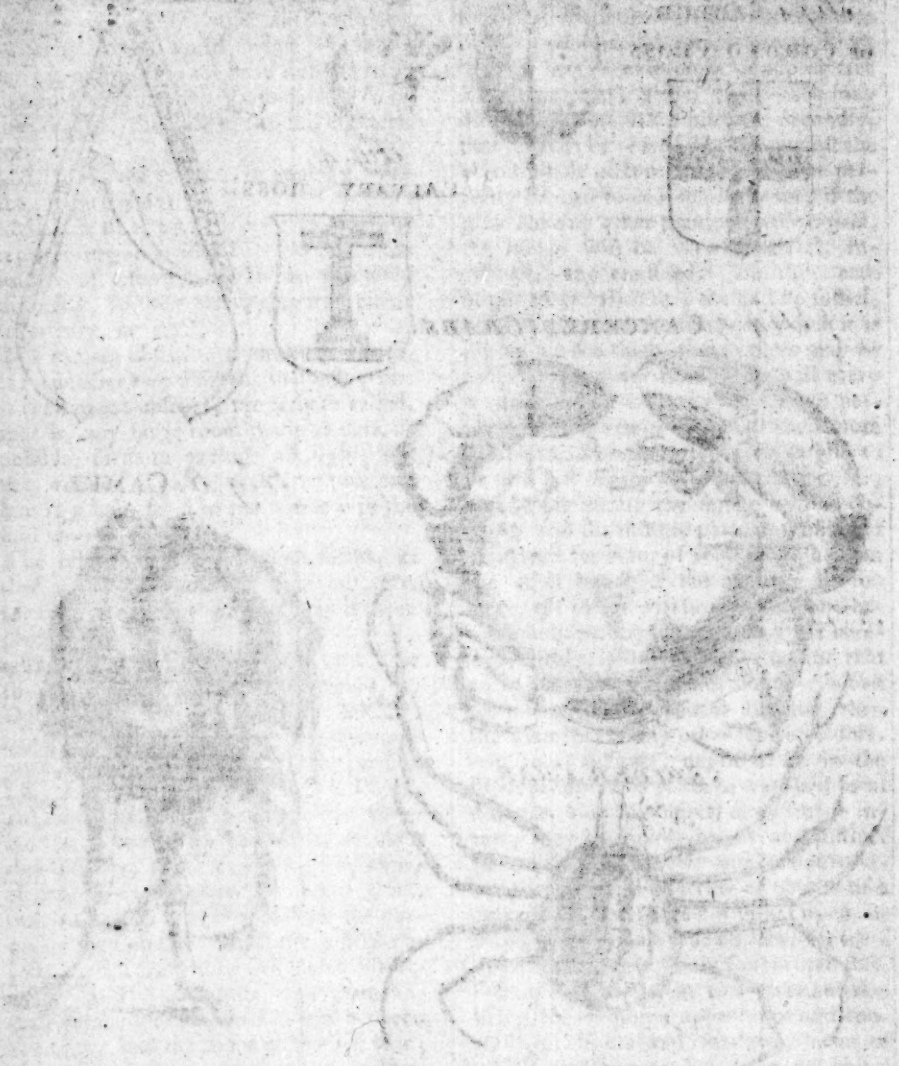
Fig. 6. CAMEL.



Fig. 7. CAMERA OBSCURA.



J. Jeffreys sculp.



BRITISH MUSEUM

is the beſt; though, for viewing the ſhadows in greateſt perfections, an eaſt or weſt window will anſwer the end beſt. Ninthly, as the image is formed only by the reflected rays of the ſun, ſo due care ſhould be taken that none of the ſun's direct rays fall on the lens in the window; for, if they do, they will by mixing with the former greatly diſturb the picture, and render it very confuſed and unpleaſant to view. Tenthly, as white bodies reflect the incident rays moſt copiouſly, and black ones abſorb them moſt; ſo, to make the picture moſt perfect, it ought to be received upon a very white ſurface, as paper, painted cloth, a wall, *&c.* bordered round with black, ſo that the collateral rays which come from on each ſide the object may be ſtifled, and not ſuffered to diſturb the picture by reflection.

Theſe are the neceſſary precautions for the due ordering of the various circumſtances of this experiment. We ſhall now enumerate the principal phænomena of the dark chamber. The firſt of which is, that an exact and every way ſimilar image is formed of an external object; for pencils of rays, coming from all parts of the object, will repreſent thoſe points in ſuch a manner and poſition, as will be very proportional and correſpondent to their reſpective poſitions and diſtances in the object, ſo that the whole in the image ſhall bear an exact ſimilitude or likeneſs of the object in every reſpect. The ſecond phænomenon is, that the image will bear the ſame proportion to the object, whether a line, ſuperficies, or ſolid, as their diſtances from the glaſs reſpectively. Hence the larger the focal diſtance of the glaſs, the more ample will be the picture of the ſame object, but the leſs will be the ſpace or compaſs of the plan, or reſpective view. The third phænomenon is, that the image or picture of the object is inverted; and this is not the effect of the glaſs, but the croſſing the rays in the hole through which they paſs into the room; for, if a very ſmall hole were made in the window-ſhutter of a darkened room, the objects without would be all ſeen inverted, thoſe which come from the upper part of the object going to the lower part of the image, and *vice verſa*. All that the glaſs does is to render the image diſtinct, by converging the rays of every pencil to their proper focus in the picture, the poſition of each point being the ſame as before. The fourth phænomenon is the motion or reſt of the ſeveral parts of the picture, according as thoſe in the object are in either ſtate. The reaſon of this is very obvious; and this it is what gives life and ſpirit to the painting and portraits of nature, and is the only particular inimitable by art. And, indeed, a more critical idea may be formed of any movement in the picture of a darkened room, than from obſerving the motion of the object itſelf: for inſtance, a man walking in a picture appears to have an undulating motion, or to riſe up and down every ſtep he takes; whereas nothing of this kind is obſerved in the man himſelf, as viewed by the bare eye. The fifth phænomenon is the colouring of the optic picture; every piece of imagery has its proper tints and colours, and thoſe always heightened and rendered more intenſe than in the object; ſo that in this reſpect it is an improvement of nature itſelf, whereas the art of the greateſt maſter can only pretend to a diſtant reſemblance and faint imitation. The reaſon why the image is coloured is, becauſe, the ſeveral points of the object reflecting ſeveral ſorts of coloured rays to the glaſs, thoſe rays will give a repreſentation of thoſe ſeveral parts reſpectively, and in their own colour, and therefore in thoſe of the object; but thoſe colours will be heightened, becauſe they are crouded into a leſs ſpace. The ſixth phænomenon is the claro obſcuro, as the Italians call it; that is, the intenſity of light and ſhadow in the picture: and this as well as the colouring is greatly heightened, above what it is in the object, by reaſon of the leſſer area of the picture. Here every light and every ſhade is expreſſed in its proper degree, from the moſt brilliant in the one to the moſt jetty black of the other, incluſive of a wonderful variety in the ſeveral parts, ariſing from the different ſituations of the ſeveral parts of the object, and the different angles of reflection. A juſt imitation of nature in the diſtribution of light and ſhadows is perhaps the moſt difficult part of the art of painting, and on which its greateſt perfection depends. The ſeventh phænomenon is the optical perſpective, or projection of the image, which is not in plano, or on a plane, as in common perſpective, but on a ſurface deſcribed by the revolution of a conic ſection about its axis; therefore, though in general a plane ſurface is made uſe of, and may do very well in large repreſentations, yet in ſmaller ones, as thoſe of the portable Camera's,

mera's, it is neceſſary to have the image or picture complete, or every-where well defined, that it be received upon the ſurface of an elliptic figure, and ſuch as is ſuited to the middle diſtance of the objects. But this is a nicety which few will think worth regarding, who do not aim at a very great accuracy indeed in what they do.

We ſhall finiſh this ſubject with an obſervation that may be uſeful to perſons concerned in drawing; and that is, that, if an object be placed juſt twice the focal diſtance from the glaſs without, the image will be formed at the ſame diſtance from the glaſs within the room, and conſequently will be equal in magnitude to the object itſelf.

CAMERARIA, in botany, a genus of the pentandria-monogynia claſs of plants, the flower of which is a petal of a funnel-form, with a cylindraceous long tube, ventricoſe both at the baſe and the top, a plane limb divided into five lanceolated ſegments: the fruit is compoſed of two oblong follicles, bent horizontally, obtuſe at both ends, and ſending out a lobe on each ſide, near the baſe; they have one cell, with one valve, containing numerous, oval, and imbricated ſeeds, inſerted in a large oval membrane, at the baſe.

CAMERATED, among builders, the ſame with vaulted or arched.

CAMERLINGO, according to Ducange, ſignified formerly the pope's or emperor's treaſurer: at preſent, camerlingo is no where uſed, but at Rome, where it denotes the cardinal who governs the eccleſiaſtical ſtate, and adminiſters juſtice. It is the moſt eminent office at the court of Rome, becauſe he is at the head of the treaſury. During a vacation of the papal chair, the cardinal camerlingo publiſhes edicts, coins money, and exerts every other prerogative of a ſovereign prince; he has under him a treaſurer general, auditor general, and twelve prelates called clerks of the chamber.

CAMERON-CAPE, a promontory on the north part of the province of Honduras, in north America.

CAMERONIANS, a party of preſbyterians, which ſprung up in Scotland, in the reign of king Charles II. They affirmed that the king had forfeited his right to the crown, by breaking the ſolemn league and covenant, which were the terms on which he received it. They pretended both to dethrone and excommunicate him; and broke out into an open rebellion. Upon the revolution, they were reconciled to the kirk, and their preachers ſubmitted to the general aſſembly of the church of Scotland, in 1690.

CAMILLI, and CAMILLÆ, in roman antiquity, a certain number of boys and girls, who aſſiſted in the ſacrifices to the gods; but more eſpecially attended the flamen dialis.

CAMINHA, a port-town of Portugal, ſituated at the mouth of the river Minho, about ten miles north of Viana; weſt lon. 9° 20′, and north lat. 41° 50′.

CAMIS, or KAMIS, in the japoneſe affairs, denote the deified ſouls of illuſtrious perſonages, believed to intereſt themſelves in the welfare of their countrymen: in which ſenſe they anſwer to the deified heroes of antiquity. See the article HERO.

CAMISADE, in the art of war, an attack by ſurpriſe in the night, or at the point of day, when the enemy is ſuppoſed a-bed.

CAMMIN, a port-town of Brandenburg-Pomerania, in Germany, ſituated on the eaſtern mouth of the river Oder, about thirty miles north of Stetin; eaſt longit. 15°, and north lat. 54°.

CAMOMILE, or CHAMÆMILE, *Chamæmilum*. See the article CHAMÆMILE.

CAMP, the ground upon which an army pitch their tents. It is marked out by the quarter-maſter-general, who appoints every regiment their ground.

The chief advantages to be minded in chuſing a camp for an army, are to have it near the water, in a country of forage, where the ſoldiers may find wood for dreſſing their victuals; that it have a free communication with garriſons, and with a country from whence it may be ſupplied with proviſions; and, if poſſible, that it be ſituated on a riſing ground, in a dry gravelly ſoil. Beſides, the advantages of the ground ought to be conſidered, as marſhes, woods, rivers, and incloſures; and if the camp be near the enemy, with no river or marſh to cover it, the army ought to be intrenched. An army always encamps fronting the enemy; and generally in two lines, running parallel about five hundred yards diſtance; the horſe and dragoons, on the wings, and the foot in the center: ſometimes a body of two, three, or four brigades is encamped behind the two lines, and is called the body of reſerve. The artillery and bread-waggons

waggons are generally encamped in the rear of the two lines. A battalion of foot is allowed eighty or an hundred paces for its camp; and thirty or forty for an interval betwixt one battalion and another. A ſquadron of horſe is allowed thirty for its camp, and thirty for an interval, and more if the ground will allow it.

The diſpoſition of the hebrew encampment was at firſt laid out by God himſelf: their camp was of a quadrangular form, ſurrounded with an incloſure of the height of ten hand's breadth. It made a ſquare of twelve miles in compaſs, about the the tabernacle; and within this was another, called the levites camp. The Greeks had alſo their camps, fortified with gates and ditches. The Lacedæmonians made their camp of a round figure, looking upon that as the moſt perfect and defenſible of any form: we are not, however, to imagine, that they thought this form ſo eſſential to a camp, as never to be diſpenſed with, when the circumſtance of the place required it. Of the reſt of the grecian camps, it may be obſerved, that the moſt valiant of the ſoldiers were placed at the extremities, the reſt in the middle.

Thus we learn from Homer, that Achilles and Ajax were poſted at the ends of the camp before Troy, as bulwarks on each ſide of the reſt of the princes.

The camps of the Romans were generally of an exact ſquare form, or elſe oblong; though this, without doubt, was often accommodated to the ſituation of the place. They were always fortified, and a very exact diſcipline maintained in them, in order to prevent ſurprizes from the enemy.

CAMP is alſo uſed, by the Siameſe, and ſome other nations in the Eaſt-Indies, as the name of the quarters, which they aſſign to the foreigners who come to trade with them.

In theſe camps every nation forms, as it were, a particular town, where they carry on all their trade, not only keeping all their ware-houſes and ſhops there, but alſo live in theſe camps with their whole families. The Europeans, however, are ſo far indulged, that at Siam, and almoſt every where elſe, they may live either in the cities or ſuburbs, as they ſhall judge moſt convenient.

Flying CAMP, the ground on which a flying army is encamped.

CAMP DISEASES are chiefly a bilious fever, malignant fever, ſcurvy, fluxes, &c. See the articles FEVER and CAMPAIGN.

CAMP-HOSPITAL. See HOSPITAL.

CAMPAIGN, in the art of war, denotes the ſpace of time that an army keeps the field, or is encamped, in oppoſition to quarters.

Concerning the healthineſs of the different ſeaſons of a campaign, the ingenious Dr. Pringle has the following obſervations: the firſt fortnight or three weeks is always ſickly, after which the ſickneſs decreaſes, and the men enjoy a tolerable ſtate of health throughout the ſummer, unleſs they get wet cloaths. The moſt ſickly part of the campaign is towards the end of Auguſt, whilſt the days are ſtill hot, but the nights cold and damp, with fogs and dews; then, if not ſooner, the dyſentery prevails: and though its violence is over by the beginning of October, yet the remitting fever gaining ground, continues throughout the reſt of the campaign, and never entirely ceaſes, even in winter-quarters, till the froſts begin. He likewiſe obſerves, that the laſt fortnight of a campaign, if protracted till the beginning of November, is attended with more ſickneſs than the two firſt months of the encampment; ſo that it is better to take the field a fortnight ſooner, in order to return into winter-quarters ſo much the earlier.

As to winter-expeditions, though ſevere in appearance, he tells us, they are attended with little ſickneſs, if the men have ſtrong ſhoes, warm quarters, fuel, and proviſions enough.

CAMPANIA, a city of the hither Principate, in the kingdom of Naples, ſituated about thirty-five miles ſouth-eaſt of the city of Naples; eaſt long. 15° 30′, and north lat. 40° 45′.

CAMPANIA, or CAMPAGNA DI ROMA, a province of the pope's territories, in Italy, extending from the city of Rome ſouth-eaſt, as far as the frontiers of the kingdom of Naples.

CAMPANIFORM, or CAMPANULATED, an appellation given to flowers reſembling a bell; a characteriſtic, whereon Tournefort eſtabliſhes one of his claſſes of plants. See the article BOTANY.

Of campaniform flowers, we meet with four varieties. 1. The bell flower, properly ſo called. 2. The oblong or tubular bell-flower. 3. The bell flower, expanded to a great width at the mouth, and conſequently reſembling a baſon.

4.

4. The globular, or roundiſh bell-flower; the mouth of which is narrower than its belly.

CAMPANOLOGIA, the art or ſcience of ringing bells.

An anonymous author has publiſhed a *campanologia* improved, or the art of ringing made eaſy, by plain and methodical rules, and directions for ringing all manner of double, triple, or quadruple changes, with variety of new peals upon 5, 6, 7, 8, and 9 bells; as alſo the method for calling bobs for any peal of triples from 168 to 2500; (being the half peal) alſo for any peal of quadruples or cators, from 324 to 11340.

CAMPANULA, BELL-FLOWER, in botany, a genus of the pentandria-monogynia claſs of plants; the flower of which conſiſts of a campanulated ſingle petal; the baſe, broad and impervious; the limb lightly divided into five broad, acute, and patulous ſegments. The nectarium is ſituated in the bottom of the corolla, and is formed of five acute connivent valves. The fruit is an angulated roundiſh capſule, with three or five cells, and having ſo many foramina in the ſides, for letting out the ſeeds. The ſeeds are numerous and ſmall, and the receptacle fixed and columnar.

CAMPBELL-TOWN, a parliament-town of Argyleſhire, in Scotland, ſituated on the eaſtern coaſt of Cantire, about ten miles weſt of the iſland of Arran; weſt longitude 5° 10′, and north lat. 55° 35′.

CAMPDEN, a market-town in Glouceſterſhire, about eighteen miles north-eaſt of Glouceſter; weſt longitude 1° 50′, and north latitude 52°.

CAMPEACHY, or CAMPECHY, a town of the province of Jucatan, on the bay or gulph of Mexico; weſt longitude 93°, north latitude 19°.

CAMPEACHY-WOOD, *campecia*, in botany, the ſame with the hæmatoxylum of Linnæus; otherwiſe called log-wood.

It is brought to us in large and thick blocks or logs, and is the heart only of the tree which produces it. It is very heavy, and remarkably hard. It is not eaſily cut, but it ſplits pretty readily in a longitudinal direction.

Campeachy-wood muſt be choſen in large and thick pieces, ſound, and of a deep-red colour. It has been long known among the dyers; but it is only of late, that it has been introduced into medicine. It is found to be an excellent aſtringent, and is given, in form of an extract, in diarrhœas, with very great ſucceſs.

CAMPEN, a port-town, in the province of Overyſſel, in the united Netherlands, near the mouth of the river Iſſel, about forty-two miles north-eaſt of Amſterdam; eaſt longitude 5° 40′, and north latitude 52° 35′.

CAMPHOR, or CAMPHIRE, in the materia medica, a vegetable ſubſtance, of a particular nature, being neither a reſin, nor a volatile ſalt, nor an oil, nor a juice, nor a bitumen, nor a gum, but a mixed body dry, white, tranſparent, and brittle, of a ſtrong and penetrating ſmell. The Indians diſtinguiſh two kinds of it, a finer and a coarſer; the finer is the produce of Borneo and Sumatra, is very rare, and never is ſent into Europe; the coarſer is the japoneſe kind, which is the common ſort, both in the Indies and in Europe.

The camphor, which we meet with in the ſhops, is alſo of two kinds, differing in regard to the degree of their purity, and diſtinguiſhed by the name of rough and refined camphor.

The tree, which produces camphor, is a ſpecies of bay-tree, every part of which abounds with camphor; but it is not collected from it in the manner of other reſins, but by a ſort of chemical proceſs. The natives of the places, where the trees grow, cut the wood and roots into ſmall pieces, and put them into large copper veſſels, which they cover with earthen heads, filled with ſtraw; they give a moderate fire under them, and the camphor is raiſed in form of a white downy matter, and retained among the ſtraw; when the proceſs is over, they ſhake it out of the ſtraw, and knead it into cakes. Theſe cakes are not very compact, but eaſily crumble to pieces; they are moderately heavy, of a greyiſh or duſky reddiſh white in colour, of a pungent ſmell, and acrid taſte, and are what we call rough camphor.

Refined camphor muſt be choſen of a perfectly clean white colour, very bright and pellucid, of the ſame ſmell and taſte with the rough, but more acrid and pungent.

It is ſo volatile, that merchants uſually incloſe it in lin-ſeed, that the viſcocity of that grain may keep its particles together. It has various uſes, as in fire-works, varniſh, &c. but its principal uſe is in medicine. There have been great diſputes among

among phyſicians on the ſubject of its virtues: ſome have declared it to be cold, others hot; they argue for its being cold, from its abating venery, and being good againſt inflammations of the eyes; and thoſe, who account it hot, produce, in their favour, its acrid taſte, fragrant ſmell, its inflammability, and the great ſubtilety and volatility of its parts. At preſent, it is much uſed in medicine, both internally and externally. In caſes, both of the recent and inveterate lues venerea, this medicine, ſkilfully prepared and applied, has been recommended to be uſed inſtead of the common ſudorific decoction of the woods. It may alſo be advantageouſly mixed along with the balſams, or fine turpentines, commonly uſed at the cloſe of that diſtemper. Some phyſicians have recommended it in all inflammatory, putrid, peſtilential, and even maniacal diſeaſes. It alſo promotes the menſes and urine, and is good in ulcerations of the kidneys and bladder.

Camphor may probably be extracted from all plants, which abound with an eſſential oil; yet it would differ with regard to the ſmell, always retaining that of the tree from which it is extracted. The reader may ſee, in the philoſophical tranſactions, how Mr. Neuman, a chemiſt of Berlin, extracted camphor from thyme.

Artificial CAMPHOR is prepared with gum ſandarach, and white vinegar diſtilled, kept twenty days in horſe-dung, and afterwards expoſed a month to the ſun to dry, at the end of which, the camphor is found in form of the cruſt of a white loaf. This is alſo called juniper-gum, and maſtic.

CAMPHOR-TREE, *camphora*, the tree from which the camphor of the ſhops is prepared, being a ſpecies of laurel. See the article LAURUS.

CAMPHORATED, in pharmacy, ſomething impregnated with the virtues of camphor. See the article CAMPHOR.

CAMPHORATED JULEP. See JULEP.

CAMPHOROSMA, in botany, a genus of the tetrandria-monogynia claſs of plants, the calyx of which is a permanent perianthium of one tubulated leaf: there is no corolla: the pericarpium is a capſule of one cell, open at top, and covered with the cup; the ſeed is ſingle, oval, compreſſed, and ſhining.

CAMPION, in botany, a name ſometimes uſed for the lychnis. See LYCHNIS.

CAMPO-MAJOR, a town of Alentejo, in Portugal, about ten miles north of Elvas, and eleven north-weſt of Badajox; weſt long. 7° 25′, and north lat. 38° 45′.

CAMPREDON, a town of Catalonia, in Spain, about fifty miles north of Barcelona; eaſt longitude 2°, and north latitude 42° 20.

CAMPUS, in antiquity, a ſpace of ground in cities, left without any buildings, not unlike what we call fields or ſquares.

CAMPUS MAII, in antient cuſtoms, an anniverſary aſſembly of our anceſtors, held on May-day, when they confederated together for defence of the kingdom againſt all its enemies.

CAMPUS MARTIUS, among the Romans, a field, by the ſide of the Tyber, where the youth exerciſed themſelves in warlike exerciſes. It was ſo called, on account of a temple that ſtood on it, conſecrated to the god Mars. The conſuls, Brutus and Collatinus made it the place for holding the comitia or aſſemblies of people, and, in after times, it was adorned with a great quantity of fine ſtatues.

CAMUS, a perſon with a low flat noſe, hollowed in the middle.

The Tartars are great admirers of camus beauties. Rubruquis obſerves, that the wife of the great Jenghis Kan, a celebrated beauty, had only two holes for a noſe.

CANADA, an extenſive tract of North-America, bounded by New Britain, and Hudſon's bay, on the north; by the river of St. Lawrence, the Iroquois, or five indian nations, the Huron and Illonois lakes, on the eaſt and ſouth; and by unknown lands, on the weſt.

Its chief town is Quebec.

CANAL, *canalis*, in hydrography, a kind of artificial river, made for the convenience of water-carriage. See SLUICE.

The Dutch, or if we can believe the relations of travellers, the Chineſe, who inhabit a country vaſtly more extenſive than that of the Dutch, have ſhewn the great advantages reſulting from canals to a trading people. The antients often took great pains to make a communication, by water, from one place to another. Several of the kings of Egypt have endeavoured to join the Red-ſea with the Mediterranean, by a canal opened from the Red-ſea to one of the arms of the Nile, which diſcharges itſelf into the Mediterranean; and the turkiſh Solyman II. employed 150,000 men upon this buſineſs to no purpoſe.

There are ſeveral large canals in France; that of Briare, begun under Henry IV. and finiſhed under Lewis XIII. eſtabliſhes a com-

a communication between the Loire and the Seine by the Loing. There are forty-two ſluices upon it. But the greateſt and moſt wonderful work of that kind, and at the ſame time one of the moſt uſeful, is, the junction of the two ſeas, by the canal of Languedoc, propoſed under Francis I. but not finiſhed till the time of Lewis XIV.

CANAL, in anatomy, a duct or paſſage through which any of the juices flow. As 1. the ſemicircular canals, diſtinguiſhed by the epithets of the largeſt, the middle one, and the leaſt, in the labyrinth of the ear, opening by five orifices in the veſtibule. 2. The canals of the auditory nerve, *viz.* the common and larger, in which there are little apertures into the labyrinth, and the proper, narrower, and longer terminating partly, by a little aperture, in the cavity of the cranium, and partly in the aquæduct of Fallopius. 3. The canalis arterioſus, between the pulmonary artery and the aorta of a fœtus, which ſerves for a peculiar circulation in the fœtus. 4. The naſal canal. 5. The canalis ſemilunaris. And, 6. The canalis venoſus. See the articles FOETUS, NOSE, *&c.*

CANAL *of the larmier*, the hollowed platfond or ſoffita of a cornice, which makes the pendent mouchette. See the articles LARMIER, and SOFFITA.

CANAL, *of the volute*, in the ionic capital, the face of the circumvolutions incloſed by a liſtel.

CANALICULATE, or CANALICULATED, ſomething hollowed in the manner of a canal; thus, we ſay, a canaliculated leaf, a canaliculated ſtalk.

CANARIES, iſlands, to the number of ſeven, ſituated in the atlantic ocean, between 12° 21′ of weſt longitude, and between 27° and 29° north latitude; the moſt eaſterly of them lying about one hundred and fifty miles from cape Non on the coaſt of Biledulgerid, in Africa.

CANARY, properly ſo called, is a conſiderable iſland, about one hundred and fifty miles in circumference; the chief town of which is Palma, from whence comes the excellent palm-ſack, and other rich wines.

It lies in 16° weſt longitude, and between 27° and 28° north latitude.

CANARY-BIRD, *paſſer canarienſis*, the engliſh name of the whitiſh fringilla, with the wings and tail greeniſh.

Canary-birds are natives of the canary-iſlands, whence they have got their name; but the melody of their voice is ſo ſweet, that there are few nations in Europe, which do not keep them in cages, where they very readily breed. See plate XXXVI. fig. 1.

CANCER, the CRAB, in zoology, the name of one of the diviſions of ſquillæ, comprehending all thoſe with ſhort-tails. See the article SQUILLA.

Crabs are a well-known ſhell-fiſh, of which there are a great many ſpecies; as the common large crab, the ſpider-crab, the molucca-crab or king-crab, the little wooly crab, the prickly long-armed-crab, *&c.* See plate XXXV. fig. 5. where n° 1 repreſents the common great crab, and n° 2. the ſpider-crab.

CANCER, in medicine, a roundiſh, unequal, hard, and livid tumour, generally ſeated in the glandulous parts of the body, ſuppoſed to be ſo called, becauſe it appears at length, with turgid veins ſhooting out from it, ſo as to reſemble, as it is thought, the figure of a crab-fiſh; or, as others ſay, becauſe, like that fiſh, where it has once got, it is ſcarce poſſible to drive it away.

Cancerous, or ſchirrous tumours, often appear ſpontaneouſly, without any evident cauſe, and ſeem peculiar to certain conſtitutions; at other times, they may be accidental, or proceed from ſharp, corroſive, or other coagulating juices in the body, errors in the non-naturals, a ſtoppage in the neceſſary evacuations, contuſion, ſtagnation, or coagulation of milk in the breaſts, *&c.*

The cancer is allowed to be the moſt terrible evil that befals the body; it is uſually cured, while yet a ſmall tumour of the bigneſs of a nut, or, at moſt, a ſmall egg, by extirpation. When it ſeizes the breaſt, or is burſt into an ulcer, amputation takes place. It begins without any pain, and appears, at firſt, like a chicory-pea, but grows apace, and becomes very painful. The tumour ariſes generally on the lax, glandulous parts, as the breaſts and emunctories: the reaſon of its appearing in the breaſts, more than in other parts, is their being full of glands, with lymphatics and blood-veſſels among them: the ſmalleſt contuſion, compreſſion, or punction extravaſates thoſe liquors, which grow, by degrees, acrimonious from the cancer.

The cancer is found in other ſoft ſpungy parts of the body; and there have been ſome found in the gums, belly, neck of the matrix, ureters, lips, noſe, cheeks, abdomen, penis, thighs, *&c.*

A cancer, ariſing on the leg, is called a lupus;

lupus; on the face and noſe, a noli me tangere.

Cancers are divided, according to their ſeveral ſtages, into occult and open or ulcerated. Occult cancers are thoſe not arrived at their ſtate, or not yet burſt: ulcerated cancers are known by their roughneſs and fullneſs of holes, through which ouzes a filthy, ſtinking, glutinous matter, frequently yellowiſh; by their pungent, pains, which reſembles the pricking of pins; by their blackneſs; the ſwelling of the lips of the ulcer, and the veins about it, which are black, tumid, and varicoſe: in a cancer of the breaſt, the adjacent fleſh is ſometimes ſo conſumed, that one may ſee the cavity of the thorax; it occaſions a ſlow fever, a loathing, oftentimes a faintneſs, ſometimes a dropſy, and laſtly death. Some cancerous tumours are moveable, others fixed; ſome inflamed, others paliſh. In their beginning, they are ſometimes no bigger than a pea, but frequently increaſe gradually to the ſize of a wall-nut, egg, &c. ſometimes alſo their growth is ſudden, and at others ſlow, ſo as to continue on the increaſe many years together.

All cancers are dangerous, and ſeldom give way to the uſe of evacuating medicines: they alſo prove more difficult to cure, according to their ſize, the nature and office of the part they affect, the age of the patient, &c. Some occult cancers, particularly thoſe which happen in the breaſts of women, may remain harmleſs to the body for ſeveral years, and without ulcerating; though, upon any external injury, they may afterwards increaſe, break, and ſoon prove mortal. In this caſe, every thing, that ſoon raiſes the velocity of the blood, ſhould be carefully avoided. It is pretty much the preſent faſhion, not to meddle with the cure of cancers, whilſt occult; but only endeavour to keep them ſweet, by the common dreſſings, when they are ulcerated. Others, however, treat them in the manner following:

If the patient, afflicted with a ſmall, recent, and occult cancer, be at all plethoric, they generally order phlebotomy; afterwards, if there be any hopes of palliating the caſe, lenient purgatives to be repeated occaſionally: iſſues alſo have their uſe, and may contribute to prevent the farther growth of a recent cancer; a due regimen being carefully obſerved, whilſt they are running.

Sometimes a cancer happens in the eye. This caſe, if it degenerates into an ulcer, is extremely dangerous, and the cure very uncertain, eſpecially if it ſeems to happen ſpontaneouſly, is of long ſtanding, or the patient in years: if the tumour is recent, it may be attempted to be diſcuſſed; but if it increaſes, ſo as to endanger the life of the patient, it muſt either be conſumed with cauſtics, or, if poſſible, totally extirpated. When the whole ball of the eye is grown cancerous, it has been entirely taken out of its cavity, without preventing the diſorder from being mortal.

CANCER, in aſtronomy, one of the twelve ſigns of the Zodiac, repreſented on the globe in the form of a crab, and thus marked (♋) in books.

Ptolemy makes it contain only thirteen ſtars, Tycho Brahe fifteen, Bayer and Hevelius twenty-nine, and Flamſtead no leſs than ſeventy-one.

It is the fourth ſign, reckoning from aries, and gives name to one of the quadrants of the ecliptic.

Tropic of CANCER, in aſtronomy, a leſſer circle of the ſphere parallel to the equator, and paſſing through the beginning of the ſign cancer.

CANCHERIZANTE, or CANCHERIZATO, in the italian muſic, a term ſignifying a piece of muſic that begins at the end, being the retrogade motion from the end of a ſong, &c. to the beginning.

CANDAHOR, the capital of a territory of the ſame name, ſubject to Perſia: eaſt longitude 67°, and north latitude 33°.

CANDIA, the modern name of Crete, an iſland ſituated in the Mediterranean ſea, between 22° and 27° eaſt longitude, and between 35° and 36° north latitude.

There is no river of any conſequence in the whole iſland, which is watered by a multitude of rivulets; whereof Lethe is one. Here too is mount Ida, ſo much celebrated in the writings of the antients.

CANDIA or MUTIUM, is the capital of the above iſland, ſituated on its northern coaſt, in 25° eaſt longitude, and 35° 30′ north latitude.

CANDIDATE, a perſon who aſpires to ſome public office.

In the roman commonwealth, they were obliged to wear a white gown, during the two years of their ſoliciting for a place. This garment, according to Plutarch, they wore without any other cloaths, that the people might not ſuſpect they concealed money for purchaſing votes;

votes; and alſo, that they might the more eaſily ſhow to the people, the ſcars of thoſe wounds they had received in fighting for the defence of the commonwealth.

CANDIDATI MILITES, an order of ſoldiers, among the Romans, who ſerved as the emperor's body-guards, to defend him in battle. They were the talleſt and the ſtrongeſt of the whole troops, and moſt proper to inſpire terror. They were called candidati, becauſe cloathed in white, either that they might be more conſpicuous, or becauſe they were conſidered in the way of preferment.

CANDISH, a province of the hither India, bounded by Chitor and Malva, on the north; by Orixa, on the eaſt; by Decan, on the ſouth; and by Guzurat, on the weſt: it is ſubject to the mogul.

CANDLE, a ſmall taper of tallow, wax, or ſperma ceti; the wick of which is commonly of ſeveral threads of cotton, ſpun and twiſted together.

A tallow-candle, to be good, muſt be half ſheeps, and half bullocks tallow, for hogs tallow makes the candle gutter, and always gives an offenſive ſmell, with a thick black ſmoke. The wick ought to be pure, ſufficiently dry, and properly twiſted, otherwiſe the candle will emit an unconſtant vibratory flame, which is both prejudicial to the eyes, and inſufficient for the diſtinct illumination of objects.

There are two ſorts of tallow-candles; the one dipped, the other moulded: the former are the common candles; the others are the invention of the ſieur le Brege, at Paris.

As to the method of making candles, in general; after the tallow has been weighed, and mixed in the due proportions, it is cut into very ſmall pieces, that it may melt the ſooner; for the tallow in lumps, as it comes from the butchers would be in danger of burning or turning black, if it were left too long over the fire. Being perfectly melted and ſkimmed, they pour a certain quantity of water into it, proportionable to the quantity of tallow. This ſerves to precipitate, to the bottom of the veſſel, the impurities of the tallow, which may have eſcaped the ſkimmer. No water, however, muſt be thrown into the tallow, deſigned for the three firſt dips, becauſe the wick, being ſtill quite dry, would imbibe the water, which makes the candles crackle in burning, and renders them of bad uſe. The tallow, thus melted, is poured into a tub, through a coarſe ſieve of horſe-hair, to purify it ſtill more, and may be uſed after having ſtood three hours. It will continue fit for uſe twenty-four hours in ſummer, and fifteen in winter.

The wicks are made of ſpun cotton, which the tallow-chandlers buy in ſkains, and which they wind up into bottoms or clues. Whence they are cut out, with an inſtrument contrived on purpoſe, into pieces of the length of the candle required; then put on the ſtick or broches, or elſe placed in the moulds, as the candles are intended to be either dipped or moulded.

Wax candles are made of a cotton or flaxen wick, ſlightly twiſted, and covered with white or yellow wax. Of theſe, there are ſeveral kinds; ſome of a conical figure, uſed to illumine churches, and in proceſſions, funeral ceremonies, &c. See the article TAPER.

Others of a cylindrical form, uſed on ordinary occaſions.

The firſt are either made with a ladle or the hand.

To make wax-candles with the ladle. The wicks being prepared, a dozen of them are tied by the neck, at equal diſtances, round an iron circle, ſuſpended directly over a large baſon of copper tinned, and full of melted wax: a large ladle full of this wax is poured gently on the tops of the wicks one after another, and this operation continued till the candle arrive at its deſtined bigneſs, with this precaution, that the three firſt ladles be poured on at the top of the wick; the fourth at the height of $\frac{1}{4}$; the fifth at $\frac{1}{2}$; and the ſixth at $\frac{1}{4}$; in order to give the candle its pyramidal form. Then the candles are taken down, kept warm, and rolled and ſmoothed upon a walnut-tree table, with a long ſquare inſtrument of box, ſmooth at the bottom.

As to the manner of making wax-candles by the hand, they begin to ſoften the wax, by working it ſeveral times in hot water, contained in a narrow, but deep caldron. A piece of the wax is then taken out, and diſpoſed by little and little, around the wick, which is hung on a hook in the wall, by the extremity oppoſite to the neck; ſo that they begin with the big end, diminiſhing ſtill as they deſcend towards the neck. In other reſpects, the method is nearly the ſame as in the former caſe. However, it muſt be obſerved, that in the former caſe, water is always uſed to moiſten

ſten the ſeveral inſtruments, to prevent the wax from ſticking; and in the latter, oil of olives, or lard, for the hands, *&c.*

The cylindrical wax-candles are either made, as the former, with a ladle, or drawn. Wax-candles drawn, are ſo called, becauſe actually drawn in the manner of wire, by means of two large rollers of wood, turned by a handle, which turning backwards and forwards ſeveral times, paſs the wick through melted wax contained in a braſs baſon, and at the ſame time through the holes of an inſtrument like that uſed for drawing wire faſtened at one ſide of the baſon.

Makers of candles are not to uſe melting houſes, without due entry thereof at the exciſe-office, on pain of 100 l. And to give notice of making candles to the exciſe-officer for the duties, and of the number, *&c.* or ſhall forfeit 50 l. Removing the candles before weighed by the officer, or mixing them with others, is likewiſe liable to penalties.

CANDLE is alſo a term in medicine, and is reckoned among the inſtruments of ſurgery. Thus the candela fumalis, or the candela pro ſuffitu odorata, is a maſs of an oblong form, conſiſting of odoriferous powders, mixed up with a third, or more, of the charcoal of willow, or lime-tree, and reduced to a proper conſiſtence with a mucilage of gum-tragacanth, ladanum, or turpentine. It is intended to excite a grateful ſmell without any flame, to correct the air, to fortify the brain, and to excite the ſpirits.

Medicated CANDLE, or BOUGIE, in ſurgery, a ſmall ſtick of wax in form of a candle, which ſurgeons introduce into the urethra, either to dilate it and keep it open, or to conſume carnoſities. There are two ſorts of theſe candles, the one ſimple, and the other compound. The ſimple are made of wax, of cat-gut, or even of lead; and the intention of them is to keep the canal of the urethra properly diſtended. Their thickneſs, therefore, ſhould be proportioned to the diameter of that canal. The compound bougies are loaded with ſome medicine capable of producing a ſuppuration, or of deſtroying carnoſities and excreſcences in the urethra.

CANDLE. Sale or auction by inch of candle, is when a ſmall piece of candle being lighted, the byſtanders are allowed to bid for the merchandize that is ſelling; but the moment the candle is out, the commodity is adjudged to the laſt bidder.

There is alſo an excommunication by inch of candle, when the ſinner is allowed to come to repentance while a lighted candle continues burning; but after it is conſumed, he remains excommunicated to all intents and purpoſes.

CANDLE-BERRY-TREE, in botany, the engliſh name of a ſpecies of myrica, called alſo the virginian myrtle, as being common in that country.

From the berries of this tree, a green kind of wax is drawn by boiling, whereof they make candles; and hence is derived the name candle-berry-tree.

CANDLEMAS, a feaſt of the church, held on the ſecond day of February, in honour of the purification of the virgin Mary. It is borrowed from the practice of the antient chriſtians, who on that day uſed abundance of lights both in their churches and proceſſions, in memory, as is ſuppoſed, of our Saviour's being on that day, declared by Simeon, "to be a light to lighten the Gentiles." In imitation of this cuſtom, the roman catholics, on this day, conſecrate all the tapers and candles which they uſe in their churches during the whole year. At Rome, the pope performs that ceremony himſelf, and diſtributes wax-candles to the cardinals and others, who carry them in proceſſion thro' the great hall of the pope's palace. This ceremony was prohibited in England, by an order of council in 1548.

CANDLESTICK, an inſtrument to hold a candle, made in different forms, and of all ſorts of matter.

The golden candleſtick was one of the ſacred utenſils made by Moſes to be placed in the jewiſh tabernacle. It was made of hammered gold, a talent in weight. It conſiſted of ſeven branches, ſupported by a baſe or foot. Theſe branches were adorned at equal diſtances with ſix flowers like lilies, and with as many bowls and knobs placed alternately. Upon the ſtock and ſix branches of the candleſtick, were the golden lamps, which were immoveable, wherein were put oil and cotton.

Theſe ſeven lamps were lighted every evening, and extinguiſhed every morning. The lamps had their tongs or ſnuffers to draw the cotton in or out, and diſhes underneath them to receive the ſparks and droppings of the oil. This candleſtick was placed in the antichamber of

of the ſanctuary, on the ſouth ſide, and ſerved to illuminate the altar of perfume, and the table of the ſhew-bread. When Solomon had built the temple of the Lord, he placed in it ten golden candleſticks, of the ſame form as that deſcribed by Moſes, five on the north, and five on the ſouth ſide of the ſanctuary. But after the babyloniſh captivity, the golden candleſtick was again placed in the temple, as it had been before in the tabernacle by Moſes. This ſacred utenſil, upon the deſtruction of the temple by the Romans, was lodged in the temple of peace, built by Veſpaſian; and the repreſentation of it is ſtill to be ſeen on the triumphal arch at the foot of mount Palatine, on which Veſpaſian's triumph is delineated.

Water-CANDLESTICK, a kind of fountain, the ſpout of which is raiſed upon a pedeſtal in form of a large baluſtrade, which carries a ſmall baſon like a table or ſtand, from which the water falls into a larger baſon, level with the alleys in a garden.

CANDY, in geography, the capital of the iſland of Ceylon, ſituated in the middle of the iſland; eaſt lon. 79°, north lat. 8°.

CANDY, or *ſugar*-CANDY, a preparation of ſugar, made by melting and cryſtalizing it ſix or ſeven times over, to render it hard and tranſparent. It is of three kinds, white, yellow, and red. The white comes from the loaf-ſugar, the yellow from the caſſonado, and the red from the muſcovado. See SUGAR.

Sugar-candy is moſt proper in colds, becauſe it melts ſlowly, and thereby gives time to the ſaliva to mix with it, and thus to blunt the acrimony of the phlegm.

CANDYING, in pharmacy, the act of preſerving ſimples in ſubſtance, by boiling them in ſugar.

The performance of this originally belonged to the apothecaries, but is now become a part of the buſineſs of a confectioner.

CANE, *arundo*, in botany. See the article ARUNDO.

CANE denotes alſo a walking-ſtick. It is cuſtomary to adorn it with a head of gold, ſilver, agate, &c. Some are without knots, and very ſmooth and even; others are full of knots, about two inches diſtant from each other. Theſe laſt have very little elaſticity, and will not bend ſo well as the others.

Canes of Bengal, are the moſt beautiful which the Europeans bring into Europe. Some of them are ſo fine, that people work them into veſſels or bowls, which being varniſhed over in the inſide with black or yellow lacca, will hold liquors as well as glaſs or china-ware does, and the Indians uſe them for that purpoſe.

CANE, *canna*, is alſo the name of a long meaſure, which differs acccording to the ſeveral countries where it is uſed.

At Naples, the cane is equal to 7 feet 3 ½ inches engliſh meaſure: the cane of Tholouſe, and the upper Languedoc, is equal to the varre of Arragon, and contains 5 feet 8 ⅔ inches: at Montpelier, Provence, Dauphiné, and the lower Languedoc, to 6 engliſh feet 5 ½ inches.

CANEA, a ſea-port town on the north ſide of Candia, eſteemed the ſecond on the iſland. It is a pretty good harbour, but the fortifications are out of repair: eaſt longitude 24°, north latitude 35° 36′.

CANEPHORÆ, in grecian antiquity, virgins who when they became marriageable, preſented certain baſkets full of little curioſities to Diana, in order to get leave to depart out of her train, and change their ſtate of life. See the next article.

CANEPHORIA, in grecian antiquity, a ceremony which made part of a feaſt celebrated by the athenian virgins, on the eve of their marriage day. See the laſt article.

At Athens, the canephoria conſiſted in this: the maid, conducted by her father and mother, went to the temple of Minerva, carrying with her a baſket full of preſents, to engage the goddeſs to make the marriage ſtate happy; or, as the ſcholiaſt of Theocritus has it, the baſket was intended as a kind of honourable amends made to that goddeſs, the protectrix of virginity, for abandoning her party; or a ceremony to appeaſe her wrath. Suidas calls it a feſtival in honour of Diana. See CANEPHORÆ.

CANEPHORIA is alſo the name of a feſtival of Bacchus, celebrated particularly by the Athenians, on which the young maids carried golden baſkets full of fruit; which baſkets were covered, to conceal the myſtery from the uninitiated.

CANETO, a fortified town of the dutchy of Mantua, ſituated on the Oglio, about twelve miles ſouth-weſt of Mantua; eaſt longitude 10° 50′, north latitude 45°.

CANICULA, or CANICULUS, in aſtronomy, the ſame as the canis minor. See the article CANIS MINOR.

It

It is alſo a name given to one of the ſtars of the conſtellation canis major, called the dog-ſtar, and by the Greeks, ſirius.

CANICULAR DAYS, commonly called dog-days, a certain number of days preceding and enſuing the heliacal riſing of the canicula, or the dog-ſtar, in the morning. The Ethiopians and Egyptians began their year at the riſing of the dog-ſtar, reckoning to its riſe again the next year, which is called the annus canarius. The Romans ſuppoſed it to be the cauſe of the ſultry weather uſually felt in the dog-days; and therefore ſacrificed a brown dog every year at its riſing, to appeaſe its wrath.

The dog-days begin towards the end of July, and end the beginning of September.

CANINE, whatever partakes of, or has any relation with the nature of a dog. Thus,

CANINE-TEETH, in anatomy, are two ſharp-edged teeth in each jaw; one on each ſide, placed between the inciſores and molares. See the article TOOTH.

CANINE MUSCLES, a pair of muſcles common to both lips. They ariſe from the hollow on each ſide under the os jugalis, in the os maxillare, and are inſerted into the angle of the lips.

CANINE APPETITE. See BULIMY.

CANIS, DOG, in zoology, the name of a comprehenſive genus of quadrupeds, of the order of the feræ.

They are diſtinguiſhed from the other genera of this order, by the number of their teats, or paps, which in the dog-kind are ten, four on the breaſt, and ſix on the belly: add to this, that their feet are adapted to running; they have five toes on the fore ones, and four on the hinder.

Under this genus are comprehended, 1. The common dog, or canis with a crooked tail, bending backwards. 2. The wolf, or canis with a ſtraight tail, ſhorter than his body. 3. The fox, or canis with a ſtraight tail, equal in length to his body. 4. The hyæna, or lupus marinus, with the hair of its neck erect, and conſiderably long. See DOG, &c.

CANIS MAJOR, in aſtronomy, a conſtellation of the ſouthern hemiſphere, conſiſting of eighteen ſtars, according to Ptolemy; of thirteen, according to Tycho; and thirty-two in the britannic catalogue.

CANIS MINOR, CANICULUS, or CANICULA, in aſtronomy, a conſtellation of the northern hemiſphere. In Ptolemy's catalogue, the canis minor comprehends two ſtars; in that of Tycho, five; and in the britannic catalogue, fifteen.

CANKER, a ſpeck made by a ſharp humour, which gnaws the fleſh almoſt like a cauſtic; very common in the mouths of children.

CANKER, a diſeaſe incident to trees, proceeding chiefly from the nature of the ſoil. It makes the bark rot and fall. If the canker be in a bough, cut it off; a large bough ſhould be cut off at ſome diſtance from the tree; and a ſmall one cloſe to it: but for over-hot ſtrong ground, the mould is to be cooled about the roots with pond-mud, and cow-dung.

CANNA, in botany, a genus of plants of the monandria-monogynia claſs, the flower of which is monopetalous, and divided into ſix parts. The laciniæ are lanceolated, cohering at the baſes, of which the three exterior ones are erect; the three interior ones are longer than theſe, and two of them are erect, and one reflex. The fruit is a roundiſh, ſcabrous, coronated, triſulcated capſule, with three cells and three valves, containing ſome globoſe ſeeds. See CANNACORUS.

CANNABIS, HEMP, in botany, a genus of the dioecia-pentandria claſs of plants. There is no corolla, but the calyx of the male flower is divided into five parts; and that of the female, is compoſed of a ſingle leaf, acuminated and opening ſideways. The pericarpium is very ſmall, and the ſeed is a globoſe, depreſſed, bivalvular nut.

CANNACORUS, in botany, the name uſed by Tournefort for the canna of Linnæus. See plate XXXVI. fig. 2.

CANNEL-COAL, in the materia medica, a ſubſtance which has a long time, tho' with very little reaſon, been confounded, both by authors and druggiſts, with jet. It is dug up in many parts of England in great abundance, particularly in Lancaſhire, where it is burnt as common fuel. It is worked into toys and utenſils of various kinds, under the name of jet. In medicine, it has the credit of being good in the colic, and of being, in general, an emollient and diſcutient: but the preſent practice takes no notice of it.

CANNIBAL, or CANIBAL, is uſed by modern writers for an anthropophagus, or man-eater, more eſpecially of the Weſt-Indies. See ANTHROPOPHAGY.

CANNON, in the military art, an engine or fire-arm for throwing iron, lead, or ſtone bullets by force of gun-powder. Cannons at firſt were called bombardæ, from the noiſe they made. They had likewiſe the name of culverin, baſiliſk, &c.

&c. from the beasts that were represented upon them; and the Spaniards, from devotion, gave them the name of saints; witness the twelve apostles which Charles V. ordered to be cast at Malaga, for his expedition to Tunis.

The most remarkable parts about a cannon, are the cascabel, mouldings, base-ring, touch-hole, vent-ring, reinforced-ring, trunions, dolphins, trunion-ring, cornish-ring, neck, muzle, face, and chace or cylinder. See each of these in its proper place.

The metal of which cannons are composed, is either iron, or which is more usual, a mixture of copper, tin, and brass; the tin being added to the copper, to make the metal more dense and compact; so that the better and heavier the copper is, the less tin is required. Some to an hundred pounds of copper, add ten of tin, and eight of brass; others ten of tin, five of brass, and ten of lead. The sieur Bereau pretends, that when old pieces of metal are used, the founder ought to add to one hundred weight of that metal, twenty-five pounds of good copper, and five pounds of tin. Braudius describes a method of making cannon of leather, and it is certain the Swedes made use of such in the long war in the last century; but these burst too easily to have much effect. With regard to iron cannon, they are not capable of so much resistance as those of brass; but as they are less expensive, they are often used on board of ships, and also in several fortified places.

For the method of casting cannon, see the article FOUNDERY.

Cannons are distinguished by the diameters of the balls they carry. The rule for their length is, that it be such as that the whole charge of powder be on fire, before the ball quit the piece. If it be too long, the quantity of air to be drawn out before the ball, will give too much resistance to the impulse; and that impulse ceasing, the friction of the ball against the surface of the piece, will take off from the motion.

In former days, cannon were made much longer than they are now; but experience has taught us, that a ball moves with a greater impetus thro' a less space than a greater: and accordingly it is found, that an iron ball of 48 pounds weight, goes farther from a short cannon, than another ball of 96 pound out of a longer piece; whereas, in other respects, it is certain, the larger the bore and ball, the greater the range. But for the range of a cannon, See the article PROJECTILE.

It is found too, by experience, that of two cannons of equal bore, but different lengths, the longer requires a greater charge of powder than the shorter. The ordinary charge of a cannon is, for the weight of its gun-powder to be half that of its ball.

We shall here subjoin a table exhibiting the names of the several cannon, their length, their weight, and that of their ball, as they obtain among us.

Names of cannon.	wt. of an iron ball.		weight of the cannon.	length of the cannon.	
	lb.	oz.	lb.	f.	inch.
Cannon royal	48	0	8000	12	0
Demi cannon large	36	0	6000	12	0
Demi cannon ordinary	32	0	5600	12	0
Demi cannon least	30	0	5400	11	0
Culverin largest	20	0	4800	12	0
Culverin ordinary	17	5	4500	12	0
Culverin least	15	0	4000	11	0
Demi culverin ordinary	10	11	2700	11	0
Demi culverin least	9	0	2000	10	0
Saker ordinary	6	0	1500	10	0
Saker least	4	12	1400	8	0
Minion largest	3	12	1000	8	0
Minion ordinary	3	4	800	7	0
Falcon	2	8	750	6	0
Falconet	1	5	400	5	6
Rabinet	0	8	300	5	6
Base	0	5	200	4	6

Cannons are likewiſe diſtinguiſhed according to the diameter of their mouth, or calibre. This calibre is divided, in conſequence of an order from the king of France, into thirty-ſix parts, in order to determine by theſe parts the dimenſions of the different moulds for cannon. We hope the reader, then, will not be diſſatisfied to find an account of the dimenſions of the ſeveral parts of cannon of five different calibres, as they are regulated by that order of the king of France, on Oct. 7, 1732, in the following table;

Pieces of cannon	of 24		of 16		of 12		of 8		of 4	
	feet.	inch. lines.	feet.	inch. lines.	feet.	inch. lines.	feet.	inch. lines.	feet.	inch. lines.
Length of the bore	9	6	9	2	8	8	7	10	6	6
Depth of the chamber	2	6		1 10						
Thickneſs of metal at breech		5 5		4 9		4 4		3 9		3
Length of the caſcabel		10 11		9 6		8 8		7 7		6
Diameter of the trunions		5 5		4 9		4 4		3 10		3
Projection of the trunions		5 5		4 9		4 4		3 10		3
Calibre of the piece		5 8		4 11		4 6		3 11		3 2
Diameter of the ball		5 6		4 9		4 4		3 9		3
Length of the whole piece	11		10	6	10		8	10	7	3
Weight of the piece	5400		4200		3200		2100		1150 lb.	

CANNON, with letter-founders and printers, the largeſt ſize of the letters they uſe. See the article LETTER.

CANNONEER, or CANNONIER, the ſame with gunner. See the articles GUNNER and GUNNERY.

CANNOW, CANOW, or CANOE. See the article CANOE.

CANNULA, in ſurgery, a tube made of different metals, principally of ſilver and lead, but ſometimes of iron.

They are introduced into hollow ulcers, in order to facilitate a diſcharge of pus or any other ſubſtance; or into wounds, either accidental or artificial, of the large cavities, as the thorax or abdomen: they are uſed in the operation of bronchotomy, and by ſome after cutting for the ſtone, as a drain for the urine.

Other cannulas are uſed for introducing cauteries, either actual or potential, in hollow parts, in order to guard the parts adjacent to that to be cauteriſed, from injury. They are of various figures; ſome being oval, ſome round, and others crooked.

CANOBIA, a town of the dutchy of Milan, ſituated on the weſt ſide of the lake Maggiore, about thirty miles weſt of Como; eaſt longitude 8° 50′, north latitude 46°.

CANOE, a ſmall boat, made of the trunk of a tree, bored hollow; and ſometimes alſo of pieces of bark, ſewed together.

It is uſed by the natives of America to go a fiſhing in the ſea, or upon ſome other expedition, either by ſea, or upon the rivers and lakes. The negroes in Guinea, and even many in the Eaſt-Indies, uſe alſo canoes. Two men are ſufficient to manage a canoe; and when the falls of the rivers oblige them to land, they carry the canoe and merchandize on their ſhoulders, till they come above or below the fall, according as they go up or down the rivers or lakes: the largeſt canoe, either made of the barks or trunks of trees, rarely holds above four perſons. The canoes of the ſavages about Davis's ſtraits, are more extraordinary; they are ſeven or eight feet long, and two broad, compoſed of ſmall ſticks, of a very pliant wood, in the form of a hurdle, and covered with ſeal-ſkins: each canoe holds but one man, who ſits in a hole made in the middle of it.

CANON, commonly called prebendary, a perſon who poſſeſſes a prebend, or revenue allotted for the performance of divine ſervice in a cathedral or collegiate church. Originally, canons were only prieſts, or inferior eccleſiaſtics, who lived in community, reſiding near the cathedral church to aſſiſt the biſhop, depending intirely on his will, ſupported by the revenues of his biſhopric, and living in the ſame houſe as his domeſtics or counſellors, &c. By degrees, theſe communities of prieſts, ſhaking off their dependance, formed ſeparate bodies; in time they freed themſelves

ſelves from their rules, and at length ceaſed to live in a community. It is maintained that the colleges of canons, which have been introduced into each cathedral, were not in the antient church, but are of modern appointment.

As the canons have degenerated from their firſt inſtitution, people have frequently made merry at their coſt; not contented with quoting them as ſo many models of indolence and ſenſuality, but their corpulency is even become proverbial.

In the romiſh church, when a perſon is promoted to the office of a canon, he muſt be preſented in a very ceremonious manner to the chapter, who aſſemble in the cathedral, in order to receive him: he kiſſes the altar thrice, after which he goes and takes his place in the choir; he afterwards makes his confeſſion of faith aloud, and ſwears to obſerve the ordinances of the church, and his holineſs the pope: being thus ſolemnly inſtalled, he is impowered to aſſiſt at the chapter, to chaunt the office of the choir, *&c.*

Canons are of various kinds, as,

Cardinal-CANONS, thoſe attached, or, as the latins call it, *incardinati*, to a church, as a prieſt is to a pariſh.

Domicellory-CANONS, young canons, who, not being in orders, had no right in any particular chapters.

Expectative-CANONS were ſuch as, without having any revenue or prebend, had the titles and dignities of canons, a voice in the chapter, and a place in the choir, till ſuch time as a prebend ſhould fall.

Foreign-CANONS, ſuch as did not officiate in the canonries to which they belonged. To theſe were oppoſed manſionary canons.

Regular-CANONS, thoſe who ſtill live in community, and who, like religious, have to the practice of their rules, added the ſolemn profeſſion of vows.

Tertiary-CANON, a perſon who had only the third part of the revenues of the canonicate.

CANON, in an eccleſiaſtical ſenſe, a law, rule, or regulation of the policy and diſcipline of a church, made by councils either general, national, or provincial.

CANONS *of the apoſtles*, a collection of eccleſiaſtical laws, which, tho' very antient, were not left us by the apoſtles. It is true, they were ſometimes called apoſtolic canons; but this means no more than that they were made by biſhops, who lived ſoon after the apoſtles, and were called apoſtolical men. They conſiſt of regulations, which agree with the diſcipline of the ſecond and third centuries: the Greeks generally count eighty-five, but the Latins receive only fifty, nor do they obſerve all theſe.

CANON *of maſs*, in the romiſh church, the name of a prayer which the prieſt reads low to himſelf, the people kneeling.

In this part of the maſs, the prieſt particularly mentions ſome perſons for whom he is going to offer the ſacrifices, and prays to God for the redemption of their ſouls, the hopes of their ſalvation, *&c.*

Paſchal-CANON, a table of the moveable feaſts, ſhewing the day of Eaſter, and the other feaſts depending on it, for a cycle of nineteen years.

CANON *of ſcripture*, a catalogue or liſt of the inſpired writings, or ſuch books of the bible as are called canonical; becauſe they are in the number of thoſe books which are looked upon as ſacred, in oppoſition to thoſe which are either not acknowledged as divine books, or are rejected as heretical and ſpurious, and are called apocryphal. This canon may be conſidered as jewiſh and chriſtian, with reſpect to the ſacred writings acknowledged as ſuch by the Jews, and thoſe admitted by the Chriſtians. See the articles BIBLE and INSPIRATION.

CANON, in monaſtic orders, a book wherein the religious of every convent have a fair tranſcript of the rules of their order, frequently read among them, as their local ſtatutes.

CANON is alſo uſed for the catalogue of ſaints acknowledged and canonized in the romiſh church.

CANON, a japaneſe idol, who preſides over the waters and the fiſh.

This idol, according to the repreſentation of him, has four arms, is ſwallowed up by a fiſh as far as the middle, and is crowned with flowers. He has a ſceptre in one hand, a flower in another, and a ring in the third; the fourth is cloſed, and the arm extended.

CANON, in muſic, a ſhort compoſition of two or more parts, in which one leads, and the other follows: or it is a line of any length, ſhewing, by its diviſions, how muſical intervals are diſtinguiſhed, according to the ratios, or proportions, that the ſounds terminating the intervals, bear one to another, when conſidered according to their degree of being acute or grave.

CANONE CHIURO, or CANONE IN CERPO, in

in muſic, a perpetual figure writ upon one line with ſome marks, to ſhew when the parts that imitate are to begin and end.

CANONE PARTITO, or RESOLUTO, when all the parts of a perpetual figure are writ either in partitions, or in ſeparate parts, with the proper pauſes that each is to obſerve.

CANON, in arithmetic, algebra, &c. is a rule to ſolve all things of the ſame nature with the preſent inquiry; thus, every laſt ſtep of an equation in algebra, is ſuch a canon; and, if turned into words, is a rule to ſolve all queſtions of the ſame nature with that propoſed.

The tables of logarithms, artificial ſines and tangents, are called likewiſe by the name of canon.

CANON-LAW, a collection of eccleſiaſtical laws, ſerving as the rule and meaſure of church-government.

The power of making laws was exerciſed by the church before the roman empire became chriſtian. The canon-law that obtained throughout the weſt, till the twelfth century, was the collection of canons made by Dionyſius Exiguus in 520, the capitularies of Charlemaign, and the decrees of the popes, from Sircius to Anaſtaſius.

The canon-law, even when papal authority was at its height in England, was of no force when it was found to contradict the prerogative of the king, the laws, ſtatutes, and cuſtoms of the realm, or the doctrine of the eſtabliſhed church. The eccleſiaſtical juriſdiction of the ſee of Rome in England, was founded on the canon-law; and this created quarrels between kings and ſeveral archbiſhops and prelates, who adhered to the papal uſurpation.

Beſides the foreign canons, there were ſeveral laws and conſtitutions made here for the government of the church; but all theſe received their force from the royal aſſent: and if, at any time, the eccleſiaſtical courts did, by their ſentence, endeavour to enforce obedience to ſuch canons, the courts at common law, upon complaints made, would grant prohibitions. The authority veſted in the church of England of making canons, was aſcertained by a ſtatute of Henry VIII. commonly called the act of the clergy's ſubmiſſion; by which they acknowledged, that the convocation had been always aſſembled by the king's writ; ſo that though the power of making canons reſided in the clergy, met in convocation, their force was derived from the authority of the king's aſſenting to, and confirming them.

The old canons continued in force till the reign of James I. when the clergy being aſſembled in convocation, the king gave them leave to treat and conſult upon canons, which they did, and preſented them to the king, who gave them the royal aſſent: theſe were a collection out of the ſeveral preceding canons and injunctions. Some of theſe canons are now obſolete. In the reign of Charles I. ſeveral canons were paſſed by the clergy in convocation.

CANONESS, in the romiſh church, a woman who enjoys a prebend, affixed, by the foundation, to maids, without their being obliged to renounce the world, or make any vows.

CANONICAL, ſomething belonging to, or partaking of the nature of a canon: thus we read of canonical obedience, which is that paid by the inferior clergy to their ſuperiors, agreeably to the canon-law. See the article CANON-LAW.

We alſo meet with canonical life, canonical hours, &c. uſed much in the ſame ſenſe. See the article CANON.

CANONIST, a perſon ſkilled in, or who makes profeſſion of the canon-law. See the article CANON-LAW.

CANONIZATION, a ceremony in the romiſh church, by which perſons deceaſed are ranked in the catalogue of the ſaints. It ſucceeds beatification. See the article BEATIFICATION.

Before a beatified perſon is canonized, the qualifications of the candidate are ſtrictly examined into, in ſome conſiſtories held for that purpoſe; after which one of the conſiſtorial advocates, in the preſence of the pope and cardinals, makes the panegyric of the perſon who is to be proclaimed a ſaint, and gives a particular detail of his life and miracles: which done, the holy father decrees his canonization, and appoints the day.

On the day of canonization, the pope officiates in white, and their eminences are dreſſed in the ſame colour. St. Peter's church is hung with rich tapeſtry, upon which the arms of the pope, and of the prince or ſtate requiring the canonization, are embroidered in gold and ſilver. An infinite number of lights blaze all round the church, which is

crowded with pious ſouls, who wait, with a devote impatience, till the new ſaint has made his public entry, as it were, into paradiſe, that they may offer up their petitions to him, without danger of being rejected.

The following maxim, with regard to canonization is now obſerved, tho' it has not been followed above a century, *viz.* not to enter into the inquiries prior to canonization, till fifty years, at leaſt, after the death of the perſon to be canonized. By the ceremony of canonization, it appears that this rite of the modern Romans, has ſomething in it very like the apotheoſis or deification of the antient Romans, and in all probability owes its riſe to it; at leaſt, ſeveral ceremonies of the ſame nature are conſpicuous in both.

CANONOR, a town on the Malabar-coaſt, in the hither India: eaſt long. 75°, north lat. 10°.

Here the Dutch have a fort and factory, which they took from the Portugueſe in 1663.

CANONRY, the benefice filled by a canon. It differs from a prebend, in that the prebend may ſubſiſt without the canonicate; whereas the canonicate is inſeparable from the prebend: again, the rights of ſuffrages, and other privileges, are annexed to the canonicate, and not to the prebend.

CANOPUS, in aſtronomy, a ſtar of the firſt magnitude in the rudder of Argo, a conſtellation of the ſouthern hemiſphere. See the article ARGO.

CANOPY, a magnificent covering, raiſed above an altar, throne, chair of ſtate, pulpit, and the like.

The word canopy comes from the Greek κωνωπεῖον, a net ſpread over beds to keep off the gnats, from κώνωψ, a gnat.

CANSO, a port-town of Nova-Scotia, or New Scotland, in North-America, ſituated on a narrow ſtrait, which ſeparates Nova-Scotia from the iſland of Cape-Breton: weſt longitude 62°, north latitude 46°.

CANT, or CANTING-LANGUAGE, that made up of words and phraſes not authorized by the eſtabliſhed idiom, but peculiar to certain perſons and profeſſions.

The introduction of cant-terms into the engliſh language, is attributed by ſome to the natural taciturnity of the people, which makes them curtail long words; as *phyzz* for phyſiognomy, *mobb* for mobility, &c.

CANT is alſo a term ſometimes uſed for a ſale by auction, being probably derived from the latin *quantum*.

CANT, among carpenters. When a piece of timber comes the wrong way in their work, they ſay cant it, that is, turn it over.

CANTALIVERS, in architecture, pieces of wood framed into the front or other ſides of a houſe, to ſuſpend the mouldings and eves over it.

Theſe ſeem, in effect, to be the ſame with modillions, except that the former are plain, and the latter carved: they are both a kind of cartouches, ſet at equal diſtances, under the corona of the cornice of a building.

CANTAR, or CANTARO, in commerce, a weight uſed in Italy, particularly at Leghorn, to weigh ſome ſorts of merchandizes.

There are three ſorts of cantari, or quintals, one weighs 150 pounds, the other 151, and the third 160: the firſt ſerves to weigh alum and cheeſe, the ſecond is for ſugar, and the third for wool and cod fiſh.

CANTATA, in muſic, a ſong or compoſition, intermixed with recitatives, airs, and different movements, chiefly intended for a ſingle voice, with a thorough baſs, though ſometimes for other inſtruments. When it is intended for the church, it is called *cantata morali ó ſpirituali:* but when the ſubject is on love, *cantata amoroſe*, &c.

The cantata, when performed with judgment, has ſomething in it very agreeable; the variety of the movements not cloging the ear, like other compoſitions. It was firſt uſed in Italy; then in France, whence it paſſed to us.

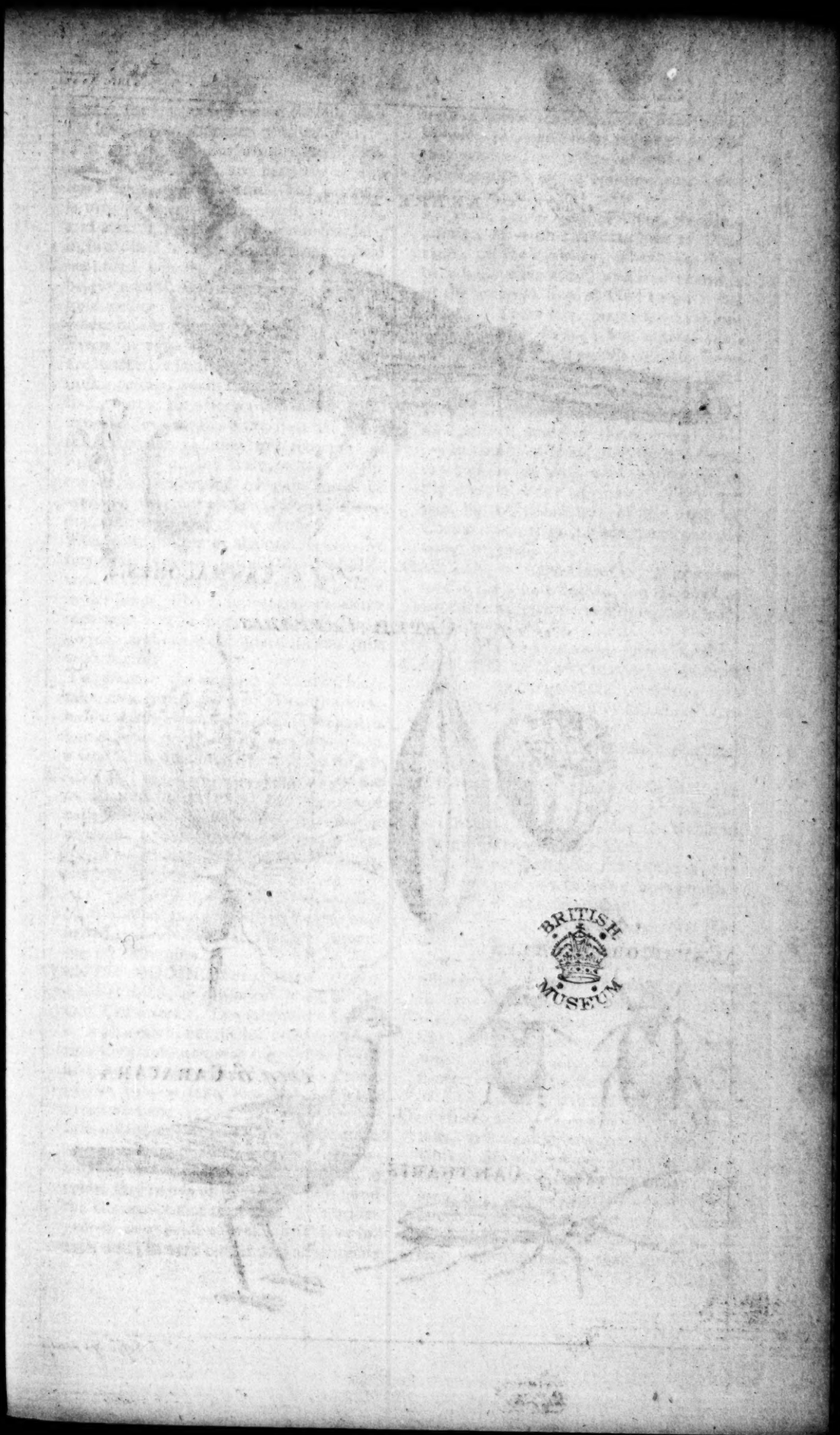
CANTEL, *cantellum*, the ſmall moiety uſually given over and above the preciſe meaſure.

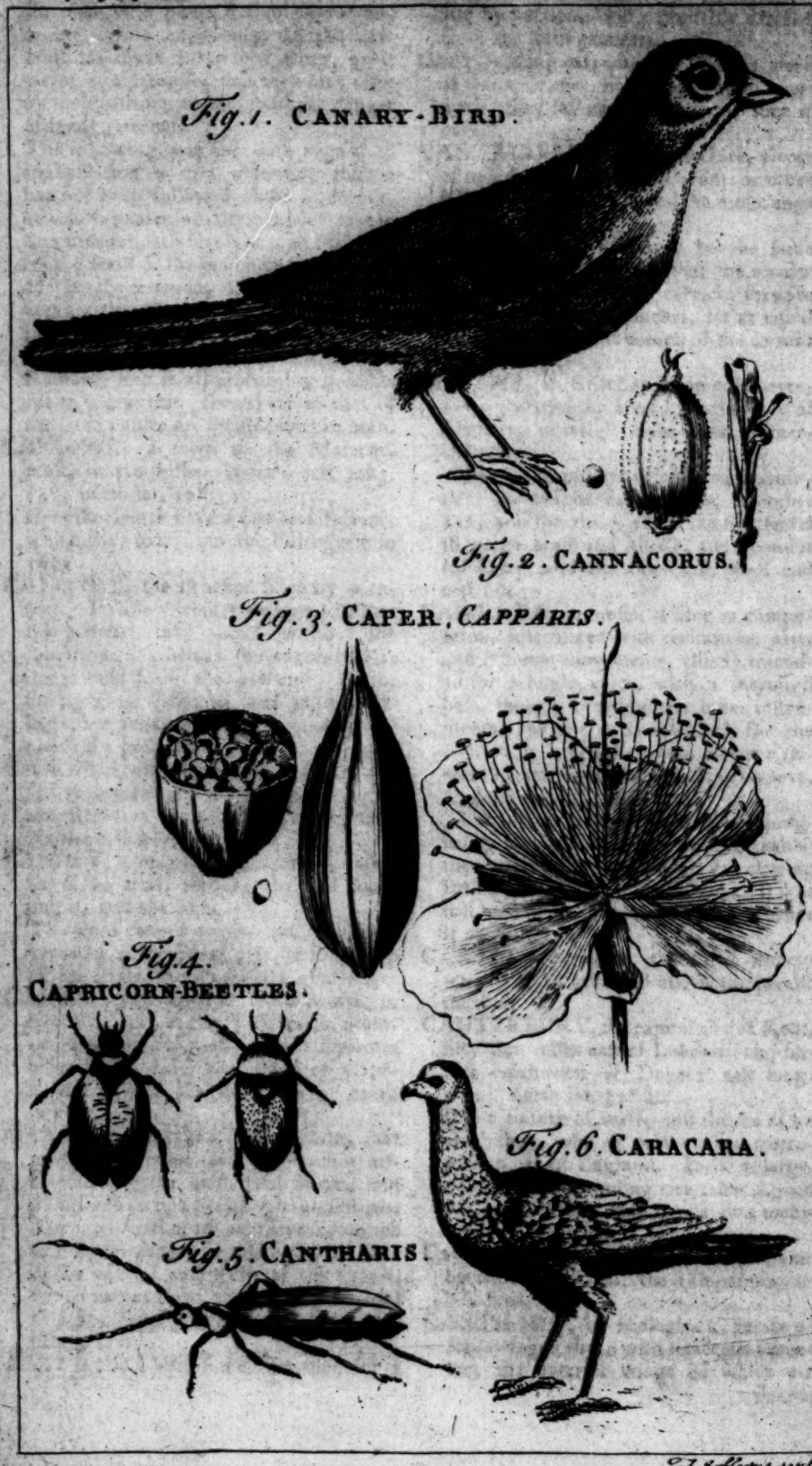
CANTERBURY, the capital city of Kent, fifty-five miles eaſt of London, and ſixteen north-weſt of Dover: eaſt long. 1° 15′ north lat. 51° 16′.

It is a county of itſelf, and the ſee of an archbiſhop, who is primate and metropolitan of all England. It is a large, populous, and trading city: has a good ſilk manufactory, and ſends two members to parliament.

CANTERBURY-BELL, in botany, the name by which ſome call the campanula, or bell-flower.

CANTHARIS, in zoology, a genus of four-winged flies, with ſetaceous antennæ, the exterior wings of which are flexile,


BRITISH MUSEUM


Fig. 1. CANARY-BIRD.
Fig. 2. CANNACORUS.
Fig. 3. CAPER. CAPPARIS.
Fig. 4.
CAPRICORN-BEETLES.
Fig. 5. CANTHARIS.
Fig. 6. CARACARA.
J. Jefferys sculp.

flexile, the thorax ſomewhat flatted, and the ſides of the abdomen plicated.

The cantharides, tho' uſually called ſpaniſh flies with us, are properly of the ſcarabæus, or beetle-kind: the creature is uſually about half an inch in length, and a third of an inch, or ſomewhat leſs, in breadth: it is of a fine ſhining and beautiful colour, on the upper ſide a bright green, with a mixture or ſhade of gold-yellow. See plate XXXVI. fig. 5. where one of them is repreſented.

From the eggs of the parent cantharis, are hatched a ſmall kind of worms, of a duſky colour, with ſix legs; and from theſe worms are afterwards produced the cantharides, as the butterflies are from the caterpillars: they are frequent in France, Spain, and Italy, where being taken, and ſuſpended over the fumes of vinegar, they are expoſed to the ſun to dry, and then ſold to the druggiſt.

The principal uſe of the cantharides, at this time, is external, in making of bliſters. We have a tincture of cantharides in the ſhops, that is reputed an excellent medicine. It is diuretic, and emmenagogue, and has been given in the gout with ſucceſs.

To prepare the tincture of cantharides, take two drams of bruiſed cantharides, half a dram of cochineal, a pint and a half of proof ſpirit; digeſt them together in a ſand heat, then filter the tincture for uſe

CANTHI, in anatomy, cavities at the extremities of the eye-lids, commonly called the corners of the eye: the greater of them, or the greater canthus, is next the noſe; the leſſer, or the little canthus, lies towards the temple.

CANTHUS, in chemiſtry, the lip of a veſſel, or that part of it which is a little hollowed or depreſſed, for the eaſy powering off of liquors.

CANTIC-QUOIN. See QUOIN.

CANTICLES, a canonical book of the Old Teſtament. The talmudiſts aſcribe it to Hezekiah, but the learned are agreed that king Solomon was the author of it; and his name is prefixed to it in the title of the hebrew text, and of the antient greek verſion.

It is a kind of epithalamium, in the form of an idyl, or bucolic, in which are introduced, as ſpeakers, a bridegroom, a bride, the friends of the bridegroom, and the companions of the bride. The bridegroom and bride expreſs their love for each other in very tender and affectionate terms; for which reaſon the Jews never allowed this book to be read by any, till they were at leaſt thirty years of age.

Some authors are of opinion, that Solomon's deſign in this piece was, to deſcribe his amour with Abiſhag, the Shunamite, or with the daughter of Pharaoh: on the contrary, others take it to be wholly allegorical, and underſtand it of the ſpiritual love of God towards his church. Some have pretended to diſcover in it five ſcenes; but others, with more juſtneſs, diſtinguiſh it into ſeven days, during which the antients celebrated their nuptials.

CANTIMARONS, or CATIMARONS, a kind of raft made of three or four hollowed trunks of trees, tied together with ropes of cocoa, with a triangular ſail in the middle made of mats. They are uſed by the inhabitants of the coaſt of Coromandel, to go a fiſhing, and to trade along the coaſt.

CANTIN, or *Cape*-CANTIN, a promontory in the atlantic ocean, on the coaſt of Morocco in Africa: weſt longitude 10°, north latitude 33°.

CANTING LANGUAGE. See CANT.

CANTIRE, or KANTIRE, a peninſula of Scotland in Argyleſhire, ſtretching into the iriſh ſea, weſtward of the iſle of Arran.

CANTO, in muſic, the treble, or at leaſt the higher part of a piece.

This word more properly ſignifies the firſt treble, unleſs the word *ſecondo*, for the ſecond, or *ripieno*, for the treble of the grand chorus, be added.

Canto-Concertante, is the treble of any principal part in a concerto, and generally plays or ſings throughout.

Canto-Fermo, or *Simplice*, is what they call the plain ſong.

Canto-Figurato, ſignifies a compoſition wherein the parts differ from one another in their figures and motions, and is the reverſe of canto-ermo.

CANTON, in geography, denotes a ſmall country, or diſtrict, conſtituting a diſtinct government: ſuch are the cantons of Switzerland. See SWITZERLAND.

CANTON is alſo the name of a large, populous, and wealthy city and port-town of China, ſituated on the river Ta, about fifty miles from the Indian ocean: eaſt longitude 112° 30′, north latitude 23° 25′. It is a fortified place, within the walls of which no chriſtians are permitted to enter, notwithſtanding their great trade thither;

thither; it being from thence that they import all manner of chineſe goods, as china-ware, tea, cabinets, raw and wrought ſilks, gold-duſt, *&c.*

CANTONED, in architecture, is when the corner of a building is adorned with a pillaſter, an angular column, ruſtic quoins, or any thing that projects beyond the naked of a wall.

CANTONED, or CANTONIZED, *cantonée*, in heraldry, the poſitions of ſuch things as are borne with a croſs, *&c.* between. He bears gules, a croſs argent cantoned with four ſcallop-ſhells.

CANTONING, in the military art, is the allotting diſtinct and ſeparate quarters to each regiment of an army; the town, where they are quartered, being divided into ſo many cantons, or diviſions, as there are regiments.

CANTRED, or CANTREF ſignifies an hundred villages, being a britiſh word, compounded of the adjective *cant*, i. e. hundred, and *tref*, a town or village. In Wales, ſome of the counties are divided into cantreds, as in England into hundreds.

CANVAS, in commerce, a very clear unbleached cloth of hemp, or flax, wove very regularly in little ſquares. It is uſed for working tapeſtry with the needle, by paſſing the threads of gold, ſilver, ſilk, or wool, through the intervals, or ſquares.

This alſo is the name of a coarſe cloth of hemp, unbleached, ſomewhat clear, which ſerves to cover womens ſtays, alſo to ſtiffen mens cloaths, and to make ſome other of their wearing apparel, *&c.*

It is likewiſe the name of a very coarſe cloth made of hemp, unbleached, ſerving to make towels, and anſwering other domeſtic purpoſes. It is alſo uſed to make ſails for ſhipping, *&c.*

CANUTI-AVIS, in ornithology, the grey tringa, with the wings ſpotted with white. See the article TRINGA.

This bird is about the ſize of the ſtarling, or ſomewhat leſs; the tail is variegated with black and white; it lives about waters; we have it in the fens of the iſle of Ely, and it is common to many other parts of Europe.

CANZONE, in muſic, ſignifies, in general, a ſong where ſome little figures are introduced: but it is ſometimes uſed for a ſort of italian poem, uſually pretty long, to which muſic may be compoſed in the ſtile of a cantata. If this term be added to a piece of inſtrumental muſic, it ſignifies much the ſame as cantata: if placed in any part of a ſonata, it implies the ſame meaning as *allegro*, and only denotes that the part to which it is prefixed, is to be played or ſung in a briſk and lively manner.

CANZONETTA, a diminitive of canzone, denoting a little ſhort ſong: the canzonette neapolitane have two ſtrains, each whereof is ſung twice over, as the vaudevilles of the French: the canzonette ſiciliane are a ſpecies of jigg, the meaſure whereof is uſually twelve eights, and ſix eights, and ſometimes both, are rondeaus.

CAOLIN, or KAOLIN. See KAOLIN.

CAORLO, an italian iſland at the bottom of the gulph of Venice, ſituated about twenty miles ſouth-weſt of Aquileia; eaſt long. 13°, north lat. 46°.

It is ſubject to Venice.

CAP, a part of dreſs made to cover the head, and much in the figure thereof.

The uſe of caps and hats is referred to the year 1449, the firſt ſeen in theſe parts of the world, being at the entry of Charles VII. into Rouen: from that time they began to take place of the hoods, or chaperoons, that had been uſed till then. When the cap was of velvet, they called it mortier; when of wool, ſimply bonnet. None but kings, princes, and knights, were allowed the uſe of the mortier. The cap was the head-dreſs of the clergy and graduates: church-men and members of univerſities, ſtudents in law, phyſic, *&c.* as well as graduates, wear ſquare caps in moſt univerſities. Doctors are diſtinguiſhed by peculiar caps, given them in aſſuming the doctorate. Paſquier ſays, that the giving the cap to ſtudents in the univerſities, was to denote that they had acquired full liberty, and were no longer ſubject to the rod of their ſuperiors, in imitation of the antient Romans, who gave a pileus or cap to their ſlaves, in the ceremony of making them free.

The cap is alſo uſed as a mark of infamy in Italy. The Jews are diſtinguiſhed by a yellow cap at Lucca, and by an orange one in France. Formerly thoſe who had been bankrupts, were obliged, ever after, to wear a green cap, to prevent people from being impoſed on in any future commerce.

CAP *of maintenance*, one of the regalia, or ornaments of ſtate belonging to the kings of England, before whom it was carried at the coronation, and other great ſolemnities. Caps of maintenance are alſo carried

ried before the mayors of ſeveral cities in England.

CAP, in a ſhip, a ſquare piece of timber put over the head, or upper end of any maſt, having a round hole to receive the maſt. By means of theſe caps, the top-maſts and top-gallant-maſts are kept ſteady and firm in the treſſel-trees where their feet ſtand.

CAP *of a gun*, a piece of lead which is put over the touch-hole of a gun, to keep the priming from being waſted or ſpoiled.

CAPACIA, a town of Italy, in the kingdom of Naples, ſituated in the hither Principate, about ſixteen miles ſouth of Salerno; eaſt longitude 15° 16′, north latitude 40° 40′.

CAPACITY, in a general ſenſe, an aptitude, or diſpoſition to retain, or hold any thing.

CAPACITY, in geometry, is the ſolid contents of any body; alſo our hollow meaſures for wine, beer, corn, ſalt, *&c.* are called meaſures of capacity.

CAPACITY, in law, the ability of a man, or body politic, to give or take lands, or other things, or ſue actions.

Our law allows the king two capacities, a natural and a political; in the firſt, he may purchaſe lands to him and his heirs; in the latter, to him and his ſucceſſors. The clergy have the like.

CAPARASON, or horſe-cloth, a ſort of cover for a horſe. For led horſes, it is commonly made of linen-cloth, bordered round with woollen, and enriched with the arms of the maſter upon the middle, which covers the croupe, and with two cyphers on the two ſides. The caparaſons for the army, are ſometimes a great bear's ſkin; and thoſe for ſtables, are of ſingle buckram in ſummer, and of cloth in the winter.

CAPAX, in the order of Malta, a name given to the knights that have reſided five years at Malta, have made four caravans, or ſea-campaigns, and are in a condition of coming to a command.

CAPE, in geography, an high land running out, with a point, into the ſea, as Cape-Norde, Cape Horn, the cape of Good hope, *&c.*

CAPE-COAST-CASTLE, the principal britiſh fort and ſettlement on the gold-coaſt of Guinea, ſituated under the meridian of London, in 5° north latitude.

CAPE, in law, a judicial writ concerning plea of lands or tenements, and is divided into cape *magnum* and cape *parvum*, both of which affect things immoveable; and beſides theſe, there is a cape *ad valenciam*.

Cape *magnum*, or the grand cape, lies before appearance, to ſummon the tenant to anſwer the default, and alſo aver to the demandant.

The cape *parvum*, is after appearance and view granted, and it ſummoneth the tenant to anſwer the default only.

Cape *magnum* is deſigned to lie, where a perſon has brought a *præcipe quod reddat* of a thing, that touches a plea of land, and the tenant makes default at the day given to him in the original writ; then this writ ſhall go for the king, to take the land into his hands: and if he comes not at the day given him, he loſes his land, *&c.*

Cape *parvum*, called petit-cape, is defined thus. When the tenant is ſummoned in plea of land, and cometh at the ſummons, and his appearance is recorded; and after he maketh default at the day that is given to him, then this writ ſhall go for the king.

Cape *ad valenciam*, is a ſpecies of cape *magnum*, where one being impleaded, and on a ſummons to warrant lands, a vouchee does not come at the day; whereupon if the demandant recovers of the tenant, he ſhall have this writ againſt the vouchee, and recover ſo much in value of his lands, in caſe he hath ſo much; and if not, there ſhall be an execution of ſuch lands and tenements as ſhall after deſcend to him in fee; or if he purchaſes afterwards, there may be a re-ſummons, *&c.* againſt him.

CAPELLA, in aſtronomy, a bright fixt ſtar of the firſt magnitude, in the left ſhoulder of the conſtellation auriga. It is, in the britannic catalogue, the fourteenth in order of that conſtellation. Its longitude is 17° 31′ 41″, its latitude 22° 51′ 47″.

CAPER, *capparis*, in botany. See the article CAPPARIS.

The buds of this plant make a conſiderable article in commerce, they are imported from Italy in pickle, and uſed in ſauces, *&c.*

The caper-bark of the ſhops, is not the bark of the branches, but that of the roots of the ſhrub which produces it.

It is an aperient and attenuant, and is recommended in nephritic caſes, and in dropſies, jaundices, and many other chronic diſeaſes: but the preſent practice does not pay any regard to it.

CAPER, in the dutch maritime affairs, a veſſel

veſſel fitted out to cruiſe upon, or take prizes from the enemy, like our privateers. See the article PRIVATEER.

CAPERQUIN, a town of Ireland in the country of Waterford, and province of Munſter, ſituated on the river Blackwater: weſt longitude 7° 50′, and north lat. 52° 5′.

CAPHAR, a duty which the Turks raiſe on the chriſtians, who carry or ſend merchandiſes from Aleppo to Jeruſalem, and other places in Syria.

This duty of caphar was firſt impoſed by the chriſtians themſelves, when they were in poſſeſſion of the Holy-Land, for the maintenance of the troops, which were planted in difficult paſſes, to obſerve the Arabs, and prevent their incurſions. It is ſtill continued, and much increaſed by the Turks, under pretence of defending the chriſtians againſt the Arabs, with whom, nevertheleſs, they keep a ſecret intelligence, favouring their excurſions and plunders.

CAPI-AGA, or CAPOU-AGASSI, a turkiſh officer, who is, as it were, grand-maſter of the ſeraglio.

He is the firſt in dignity and repute of all the white eunuchs, and is always near the grand ſignior's perſon. It is he who introduces embaſſadors to audience; and all great affairs paſs through his hands before they come to that of the prince.

CAPIAS, in law, a writ of two ſorts, one before judgment in an action, and the other after: that before judgment is called *capias ad reſpondendum*, where an original is ſued out, &c. to take the defendant, and make him anſwer the plaintiff; and that after judgment is the *capias ad ſatisfaciendum*, &c.

CAPIAS AD SATISFACIENDUM is a writ of execution that iſſues on a judgment obtained, and lies where any perſon recovers in a perſonal action, as for debt, damages, &c. in which caſes this writ iſſues to the ſheriff, commanding him to take the body of him, againſt whom the debt is recovered, who is to be kept in priſon till he make ſatisfaction.

CAPIAS CONDUCTOS AD PROFICISCENDUM, an original writ, which lies, by the common law, againſt any ſoldier, who has covenanted to ſerve the king in war, and appears not at the time and place appointed. It is directed to two of the king's ſerjeants at arms, to arreſt and take him wherever he can be found, and to bring him *coram conſilio noſtro*, with a clauſe of aſſiſtance.

CAPIAS PRO FINE is a writ lying where a perſon is fined to the king, for ſome offence committed againſt a ſtatute, and he does not diſcharge the fine according to the judgment; therefore his body ſhall be taken by this writ, and committed to gaol till the fine is paid.

CAPIAS UTLEGATUM, a writ which lies againſt any one outlawed, upon any action perſonal or criminal, by which the ſheriff is ordered to apprehend the party outlawed, for not appearing on the exigent, and keep him in ſafe cuſtody till the day of return, when he is to preſent him to the court, to be there farther ordered for his contempt.

CAPIAS IN WITHERNAM, a writ that lies for cattle *in withernam*; that is, where a diſtreſs taken, is driven out of the county, ſo that the ſheriff cannot make deliverance upon a replevin; then this writ iſſues, commanding the ſheriff to take as many beaſts of the diſtrainer.

CAPIGI, in the turkiſh affairs, the name of certain inferior officers belonging to the ſeraglio, to the number of five hundred, whoſe buſineſs is to aſſiſt the janizaries in guarding the firſt and ſecond gate of that palace; whence alſo the name capighi, which ſignifies a gate.

CAPILLAMENT, in a general ſenſe, ſignifies a hair, whence the word is applied to ſeveral things, which, on account of their length or their fineneſs, reſemble hairs: as,

CAPILLAMENTS *of the nerves*, in anatomy, the fine fibres, or filaments, whereof the nerves are compoſed.

CAPILLAMENTS, in botany, thoſe ſmall threads, or hairs, which grow up in the middle of a flower, and are adorned with little knobs at the top: thoſe knobs are called the apices, or antheræ, of a flower; and the capillaments are called the ſtamina. See the article STAMINA.

CAPILLARY, in a general ſenſe, an appellation given to things on account of their extreme fineneſs, or reſembling hair.

CAPILLARY ORES, in mineralogy, the ſame with thoſe otherwiſe denominated arboreſcent, or ſtriated.

CAPILLARY PLANTS are ſuch plants as have no main ſtem, but their leaves ariſe from the root, upon pedicles, and produce their ſeeds on the back of their leaves, as the fern, maiden-hair, &c.

Theſe plants are either with an undivided leaf, as the hemionitis and the phyllis; or with a ſingle divided leaf, which laſt have the leaf either cut or jagged in,

but

but not divided into pinnæ, clear home to the main rib, as polypodium, lonchitis, ſcolopendria, &c. or elſe the leaf divided quite home to the rib, and hanging like pinnæ, as the chamæfelix marina and the trichomanes: others have the leaf doubly divided, or at leaſt once ſubdivided, the firſt diviſion being into branches, and the ſecond into pinnæ, as the hemionis multifida, &c. others have the leaf trebly divided, or thrice ſubdivided, *viz.* firſt into branches, then into little twigs, and after this into pinnæ; and theſe are the filix ſcandens of Braſil, the filix florida, the filix mas ramoſa, &c.

CAPILLARY TUBES, in phyſics, little pipes, whoſe canals are extremely narrow, their diameter being only a half, third, or fourth of a line. See the article TUBE.

The aſcent of water, &c. in capillary tubes, is a phænomenon that has long embarraſſed the philoſophers; for let one end of a glaſs-tube, open at both ends, be immerged in water, and the liquor within the tube will riſe to ſome ſenſible height above the external ſurface: or if two or more tubes are immerged in the ſame fluid, one of them a capillary one, the other of a large bore, the fluid will aſcend higher in the capillary tube than in the other, and this in the reciprocal ratio of the diameters of the tubes.

In order to account for this phænomenon, it will be neceſſary firſt to premiſe, that there is a greater attraction between the particles of glaſs and water, than there is between the particles of water themſelves: this appears plain from experience, which proves the attractive power in the ſurface of glaſs to be very ſtrong; whence it is eaſy to conceive how ſenſibly ſuch a power muſt act on the ſurface of a fluid, not viſcid, as water, contained within the ſmall cavity or bore of a glaſs-tube; as alſo that it will be in proportion ſtronger as the diameter of the bore is ſmaller; for that the efficacy of the power follows the inverſe proportion of the diameter, is evident from hence, that only ſuch particles as are in contact with the fluid, and theſe immediately above the ſurface, can affect it. Now theſe particles form a periphery contiguous to the ſurface, the upper part of which attracts and raiſes the ſurface, and the lower part, which is in contact with it, ſupports and holds its up, ſo that neither the thickneſs nor length of the tube avails any thing, only the ſaid periphery of particles, which is always proportional to the diameter of the bore: the quantity of the fluid raiſed, will therefore be as the ſurface of the bore which it fills, that is, as the diameter; as the effect would not be otherwiſe proportional to the cauſe, ſince the quantities follow the ratio of the diameters, the heights to which the fluids will riſe, in different tubes, will be inverſely as the diameters.

Some, however, doubt whether the law holds throughout, of the aſcent of the fluid being always higher as the tube is ſmaller; Dr. Hook's experiments, with tubes almoſt as fine as cobwebs, ſeem to ſhew the contrary. The water in theſe, he obſerves, did not riſe ſo high as one would have expected. The higheſt he ever found was at 21 inches above the level of the water in the baſon, which is much ſhort of what it ought to have been by the law above-mentioned.

CAPILLARY VESSELS, in anatomy, the ſmalleſt and extreme parts of the veins and arteries.

Theſe are the leaſt, minuteſt, and inſenſible ramifications of the veins, ſo fine, that when cut or broken they yield little or no blood: they are conceived as vaſtly finer than hairs, and are beſt compared to the threads of cobwebs: they are ſometimes called evaneſcent veſſels.

Many ſmall veſſels of animal bodies have been diſcovered by the modern invention of injecting the veſſels of animals with a coloured fluid, which upon cooling grows hard. But though moſt anatomiſts know the manner of filling the large trunks, few are acquainted with the art of filling the capillaries. Mr. Monro has given us what he, after many trials, has found moſt ſucceſsful, in the Medic. Eſſ. Edinb. vol. 1. art. 9, where he enters into a very nice detail of the operation, to which we muſt refer the curious. See the article INJECTION.

CAPILLARY WORMS, in medicine, a kind of worms found in children, and otherwiſe called *crinones*. See CRINONES.

CAPILLATION, in greek τριχισμὸς, a capillary fracture in the cranium, ſo ſmall that it can ſcarce be perceived, but yet it often proves mortal. See FRACTURE.

CAPILLITIUM VENERIS, in phyſiology, denotes the fine threads ſeen floating in the air, in autumn; which, according to ſome, are only the ſulphureous and earthy particles of a cloud, after the water has been exhaled; but it ſeems more probable that they are the work of ſpiders. See the article AIR-THREADS.

CAPISTRUM, in ſurgery, a term appli-

ed to a bandage uſed in caſe of fractures of the jaws. The capiſtrum ſimplex is applied in fractures of the lower jaw, and the capiſtrum duplex, when both ſides of the jaw are fractured.

CAPISTRUM, among antient muſicians, a bandage made of ſkins, with which the mouth and lips of the performer were bound up, leaving only a ſmall chink to admit the flute. Some believe that the capiſtrum was uſed in order to conceal from the ſpectators the diſtortion of the features by inflating the cheeks. Others imagine that it was intended to moderate the breath, and give a ſoft ſound to the flute.

CAPITAL, the head, chief, or principal of a thing. Thus,

CAPITAL, in geography, denotes the principal city of a kingdom, province, or ſtate; as London is the capital of Britain, Paris of France, Madrid of Spain, York of the county of that name, &c. See the article METROPOLIS.

CAPITAL, among merchants, traders, and bankers, ſignifies the ſum of money which individuals bring to make up the common ſtock of a partnerſhip, when it is firſt formed. It is alſo ſaid of the ſtock which a merchant at firſt puts into trade, for his account. It ſignifies likewiſe the fund of a trading company, or corporation, in which ſenſe the word ſtock is generally added to it: thus we ſay, the capital ſtock of the bank, &c. The word capital is oppoſed to that of profit or gain, though the profit often increaſes the capital, and becomes itſelf a part of it.

CAPITAL CRIME, ſuch a one as ſubjects the criminal to capital puniſhment, that is, the loſs of life.

CAPITAL MEDICINES, in pharmacy, the principal preparations of the ſhops, remarkable for the number of their ingredients, and their extraordinary virtues: ſuch are mithridate, venice treacle, &c.

CAPITAL LEES, the ſtrong lees made by the ſoap-boilers, from pot-aſhes.

CAPITAL LETTERS. See CAPITALS.

CAPITAL, in architecture, the uppermoſt part of a column or pillaſter, ſerving as the head, or crowning, and placed immediately over the ſhaft, and under the entablature.

CAPITAL *of a column* is properly that whoſe plan is round.

CAPITAL *of a pillaſter* is that whoſe plan is ſquare, or, at leaſt, rectilinear.

The capital is the principal part of an order of columns or pillaſters. It is of a different form in the different orders, and is that which chiefly diſtinguiſhes and characteriſes the orders. Such of theſe as have no ornaments, as the tuſcan and doric, are called capitals of mouldings; and the reſt, which have leaves and other ornaments, capitals of ſculptures.

Tuſcan CAPITAL conſiſts of three members, *viz.* an abacus, under this an ovolo or quarter round, and under that a neck or colarino, terminating in an aſtragal, or fillet, belonging to the ſhaft. See the article ABACUS, &c.

It is the moſt ſimple and unadorned of all capitals; and the character which diſtinguiſhes it from the doric, is that the abacus is ſquare, and quite plain without moulding. It is true, authors vary a little as to the character of this capital: Vignola gives the abacus a fillet; Vitruvius and Scamozzi add an aſtragal and a fillet, between the ovolo and neck; Serlio, only a fillet; and Philander rounds the corners of the abacus. In the trajan column there is no neck, but the aſtragal of the ſhaft is confounded with that of the capital. The height of this capital is the ſame with that of the baſe, *viz.* one module, or ſemidiameter. The projecture is equal to that of the cincture at the bottom of the column, *viz.* $\frac{1}{7}$ of the module. See the article TUSCAN.

Doric CAPITAL has its abacus crowned with a talon, and three annullets under the ovolo. Authors alſo vary as to the characters of this capital: Palladio, Vignola, &c. put roſes under the corners of the abacus, and in the neck of the capital: Vitruvius makes the height of this capital equal to half the diameter of the body of the column below. See DORIC.

Ionic CAPITAL, that which is diſtinguiſhed by volutes and ovolos. The ovolo is adorned with eggs, as they are ſometimes called from their oval form. The height of this capital Mr. Perrault makes eighteen minutes, its projecture one module ſeven tenths. The differences in the character of this capital, flow moſtly from the different management of the volutes, and conſiſt in this: 1. That in the antique, and ſome of the modern, the eye of the volute does not anſwer the aſtragal of the top of the ſhaft, as Vitruvius and ſome of the moderns make it. 2. That the face of the volutes, which uſually makes a flat, is ſometimes curved and convexed, ſo that the circumvolutions go advancing outwards, as is frequent in the antique. 3. That the border or rim of the

ſcroll

ſcroll in the volute, is ſometimes not only a plane ſweep, but the ſweep is accompanied with a filet. 4. That the leaves which inveſt the balluſter are ſometimes long and narrow, ſometimes larger and broader. 5. That the two faces of the volutes are ſometimes joined at the outward corner, the balluſters meeting in the middle, to make a regularity between the faces on the front and back of the building, with thoſe of the ſides. 6. That among the moderns, ſince Scamozzi, the ionic capital has been altered, and the four faces made alike, by taking away the balluſter and hollowing all the faces of the volute inwards, as in the compoſite. 7. That Scamozzi and ſome others, make the volutes to ſpring out of the ovolo, as from a baſe; whereas in the antique the bark paſſes between the ovolo and abacus, quite ſtraight, only twiſting at its extremities, to form the volute. And laſtly, that of late years the ſculptors have added a little kind of feſtoons, ſprung from the flower, whoſe ſtalk lies on the circumvolution of the volute. See the article IONIC.

Corinthian CAPITAL is the richeſt of all, being adorned with a double row of leaves, with eight large and as many ſmall volutes, ſituated round a body, which by ſome is called campana or bell, and by others tambour. The height of this capital is two modules one third, and its projecture, one and one third. See the article CORINTHIAN.

The differences in the characters of this capital are, 1, That, in Vitruvius, *&c.* the leaves are in the form of the acanthus; whereas in the antique they are more uſually olive-leaves. 2. That their leaves are uſually unequal, the undermoſt being commonly made talleſt, but ſometimes the ſhorteſt; though they are ſometimes all equal. 3. The leaves are ſometimes ruffled, ſometimes quite plane; the firſt row generally bellies out towards the bottom, but at other times they are ſtraight. 4. Sometimes the horns of the abacus are ſharp at the corner, but moſt commonly they are cut. 5. There is ſome difference in the form and ſize of the roſe. 6. The volutes are ſometimes joined to each other, and at other times wholly ſeparated. 7. Sometimes the ſpires of the volutes continue twiſting even to the end, in the ſame courſe; and ſometimes they are turned back again near to the center, in the form of the letter S.

Compoſite CAPITAL, that which has the double row of leaves of the corinthian, and the volutes of the ionic capital. See the article COMPOSITE.

The height of this capital is two modules one third, and the projectures one and two thirds.

The differences of its character conſiſt in this, 1. That the volutes which ordinarily deſcend and touch the leaves, are in ſome works of the antique ſeparated from them. 2. That the leaves are ſometimes unequal in height, the loweſt being the talleſt; and ſometimes equal. 3. That the volutes of the moderns generally ſpring out of the baſe; whereas in the antique they run ſtraight the length of the abacus, over the ovolo, without ſtriking into the baſe. 4. That the volutes, whoſe thickneſs is contracted in the middle, and inlarged above, and below in the antique, in the works of the moderns have their ſides parallel. 5. That the volutes which have been hitherto made as if ſolid, both by the antients and moderns, are now made much lighter and more airy; the folds ſtanding hollow, and at a diſtance the one from the other.

Attic CAPITAL, that which has leaves of partition in the gorge.

For the proportions of the ſeveral members of the capitals of columns, ſee each member under its proper head, as ABACUS, VOLUTE, *&c.* and the article COLUMN.

Angular CAPITAL, that which bears the return of an entablature, at the corner of the projecture of a frontiſpiece.

CAPITAL *of a balluſter*, that part which crowns a balluſter, reſembling ſometimes the capitals of ſome order, eſpecially the ionic.

CAPITAL *of a triglyph*, the plat-band over the triglyph, called by Vitruvius tænia. It is ſometimes a triglyph which does the office of a capital to the doric pillaſter.

CAPITAL *of a nich*, a kind of little canopy made over a ſhallow nich, to cover a ſtatue.

CAPITAL *of a lanthorn*, a covering ſometimes of one ſhape, and ſometimes of another, which finiſhes the lanthorn of a dome.

CAPITAL *of a baſtion*, in fortification, a line drawn from the angle of a polygon to the point of the baſtion; or from the point of the baſtion to the middle of the gorge. Theſe capitals are from thirty-five to forty fathoms in length, from the point of the baſtion to the place where the two demi-gorges meet.

CAPITALS, among printers, large or initial

tial letters, in which titles are compoſed, and with which all periods, verſes, &c. commence.

The engliſh printers ſome time ago made it a rule to begin almoſt every ſubſtantive with a capital; a cuſtom not more abſurd than that of uſing no capitals at all, according to a french book lately publiſhed.

CAPITANATE, a province of the kingdom of Naples, ſituated on the gulph of Venice, and having the province of Moliſe on the north, and the Principate on the ſouth.

CAPITATED PLANTS, *capitatæ plantæ*, in botany, a name given by Mr. Ray to thoſe plants, whoſe ſeeds, with their down, being included in a ſcaly calyx, are conglobated into a roundiſh figure like a head: ſuch are the carduus, centaury, cinara, &c.

CAPITATION, a tax or impoſition raiſed on each perſon in conſideration of his labour, induſtry, office, rank, &c. It is a very antient kind of tribute, and anſwers to what the Greeks called κεφαλικον. The Latins call it *tributum*, by which taxes on perſons are diſtinguiſhed from taxes on merchandiſe, which were called *vectigalia*.

Capitations are never practiſed among us but in exigencies of ſtate. In France, the capitation was introduced by Lewis XIV, in 1695, and is a tax very different from the taille, being levied from all perſons, whether they be ſubject to the taille or not. The clergy pay no capitation, but the princes of the blood are not exempted from it.

CAPITE, in law, an antient tenure of land, which was held immediately of the king, as of his crown, either by knight's ſervice, or ſoccage. The tenure in capite was of two kinds; the one principal and general, the other ſpecial or ſubaltern. The former was of the king, the fountain from whence all tenures have their main original. The latter was of a particular ſubject, ſo called becauſe he was the firſt that granted the land in ſuch manner, and hence he was ſtiled *capitalis dominus*, and *caput terræ illius*.

This tenure is now aboliſhed, and, with others, turned into common ſoccage.

CAPITE CENSI, in roman antiquity, the poorer ſort of people, who in the cenſus, or aſſeſſments, were valued at little or nothing, but only named or reckoned as citizens. See the article CENSUS.

CAPITO, in ichthyology, a name given to ſeveral ſpecies of *cyprinus*, as the chub, rudd, &c. as alſo to the mugil, or mullet.

CAPITOL, in antiquity, a caſtle on the Mons Capitolinus, at Rome, where there was a temple dedicated to Jupiter, in which the ſenate antiently aſſembled; and which ſtill ſerves as the city-hall, or town-houſe, for the meeting of the conſervators of the Roman people.

The foundations of the capitol were laid by Tarquin the elder, in the year of Rome 139: his ſucceſſor Servius raiſed the walls, and Tarquin the proud finiſhed it in 221; but it was not conſecrated till the third year after the expulſion of the kings, and eſtabliſhment of the conſulate. The ceremony of the dedication of the temple was performed by the conſul Horatius, in 246.

The capitol conſiſted of three parts, a nave, ſacred to Jupiter; and two wings, the one conſecrated to Juno, and the other to Minerva: it was aſcended to by ſtairs; the frontiſpiece and ſides were ſurrounded with galleries, in which thoſe who were honoured with triumphs entertained the ſenate at a magnificent banquet, after the ſacrifices had been offered to the gods.

Both the inſide and outſide were inriched with infinite ornaments, the moſt diſtinguiſhed of which was the ſtatue of Jupiter, with his golden thunder-bolt, his ſceptre, and crown. In the capitol alſo were a temple to Jupiter the guardian, and another to Juno, with the mint; and on the deſcent of the hill was the temple of Concord.

This beautiful edifice contained the moſt ſacred depoſits of religion, ſuch as the ancylia, the books of the ſybils, &c.

Antiently the name capitol was given to the principal temples of the roman colonies, as at Conſtantinople, Jeruſalem, Ravenna, Capua, &c.

CAPITOLINE GAMES, annual games inſtituted by Camillus, in honour of Jupiter Capitolinus, and in commemoration of the capitol's not being ſurpriſed by the Gauls. Plutarch tells us, that a part of the ceremony conſiſted in the public cryer's putting up the Hetrurians to ſale by auction: they alſo took an old man, and tying a golden bulla about his neck, expoſed him to the public deriſion. Feſtus ſays, they alſo dreſſed him in a prætexta. There was another kind of capitoline games, inſtituted by Domitian, wherein there were rewards and crowns beſtowed on the poets, champions, orators, hiſtorians,

rians, and muſicians. Theſe laſt capitoline games were celebrated every five years, and became ſo famous, that inſtead of calculating time by luſtra, they began to count by capitoline games, as the Greeks did by olympiads. It appears, however, that this cuſtom was not of long continuance.

CAPITOUL, an appellation given to the chief magiſtrates of Tholouſe, on account of their meeting in a place called the capitol: they are eight in number, are choſen annually, and have each the government of a capitoulate, or precinct, like the wards of London.

CAPITULA RURALIA, aſſemblies or chapters held formerly by rural deans and parochial clergy, within the precinct of each deanry; held at firſt every three weeks, afterwards once a month; and more ſolemnly once a quarter.

CAPITULAR, in general, a book divided into ſeveral chapters, or *capitula*: but by particular application, is taken for a collection of civil and canonical law; and more eſpecially for thoſe laws and regulations which the kings of France made at the public meetings of the biſhops and temporal lords, for the government of the church. The execution of what related to church affairs was intruſted with the archbiſhops and biſhops; and thoſe capitulars which concerned the temporal government, were put into the hands of the earls and other lords. In the eighth and following centuries, biſhops called their ſynodical regulations for diſcipline, *capitula*, or capitulars: they were commonly drawn from canons of councils, or the determinations of the fathers. Theſe deciſions carried the force of law no farther than the dioceſe where they were publiſhed, unleſs approved by a council, or the metropolitan, in which latter caſe they were obſerved through the whole province.

The celebrated author of the Spirit of Laws, obſerves, that as France was divided into ſeveral ſmall principalities, in a manner independent of one another, it was a difficult matter to cauſe the capitulars to be every where obſerved; and that therefore they were, in courſe of time, entirely forgot.

CAPITULATION, in military affairs, a treaty made between the garriſon or inhabitants of a place beſieged, and the beſiegers, for the delivering up the place on certain conditions.

The moſt honourable and ordinary terms of capitulation are, to march out at the breach, with arms and baggage, drums beating, colours flying, a match lighted at both ends, and ſome pieces of cannon, waggons, and convoys, for their baggage, and for the ſick and wounded.

CAPITULATION, in the german polity, a contract which the emperor makes with the electors, in the name of all the princes and ſtates of the empire, before he is declared emperor, and which he ratifies before he is raiſed to that ſovereign dignity. The principal points which the emperor undertakes to obſerve, are, 1. To defend the church and the empire. 2. To obſerve the fundamental laws of the empire. And, 3. To maintain and preſerve the rights, privileges, and immunities of the electors, princes, and other ſtates of the empire, ſpecified in the capitulation. Theſe articles and capitulations are preſented to the emperor by the electors only, without the concurrence of of the other ſtates, who have complained from time to time of ſuch proceedings; and in the time of the weſtphalian treaty, in 1648, it was propoſed to deliberate in the following diet, upon a way of making a perpetual capitulation; but the electors have always found means of eluding the execution of this article. In order however to give ſome ſatisfaction to their adverſaries, they have inſerted in the capitulations of the emperors, and in that of Francis I. in particular, a promiſe to uſe all their influence to bring the affair of a perpetual capitulation to a concluſion. Some german authors own that this capitulation limits the emperor's power; but maintain that it does not weaken his ſovereignty: though the moſt part maintain that he is not abſolute, becauſe he receives the empire under conditions which ſets bounds to an abſolute authority.

CAPITULUM, among botaniſts, the ſame with what is otherwiſe called *umbella*.

CAPIVI, or COPIVI. See COPIVI.

CAPNOMANCY, in antiquity, a kind of divination drawn from the ſmoke of ſacrifices: when this was thin, light, and aſcended in a ſtraight line, it was deemed a good omen; and, if the contrary, an ill one.

CAPOC, a ſort of cotton as ſoft as ſilk, ſo fine and ſo ſhort that it cannot be ſpun. It is uſed in the Eaſt-Indies, as well as in Europe, to line palanquins, to make beds, matraſſes, cuſhions, pillows, &c.

CAPON, a cock chicken, gelded as ſoon as left by the dam, or as ſoon as he begins

to crow. They are of uſe either to lead chickens, ducklings, pheaſants, &c. and defend them from the kites and buzzards; or to feed for the table, they being reckoned more delicate than either a cock or a hen.

CAPON'S-TAIL GRASS, the ſame with the *feſtuca* of botanical writers. See the article FESTUCA.

CAPONIERE, or CAPONNIERE, a work ſunk on the glacis of a place, about four or five feet deep: the earth that comes out of it ſerves to form a parapet of two or three feet high, made with loop-holes or ſmall embraſſures; it is covered overhead with ſtrong planks, on which are laid clays, or hurdles, which ſupport the earth which covers all. It holds fifteen or twenty men, who fire through theſe embraſſures. They are alſo ſometimes made in the bottom of a dry moat.

CAPPACIA, a town of the hither Principate, in the kingdom of Naples. It is a biſhop's ſee, and ſituated about fifty-five miles ſouth-eaſt of the city of Naples: eaſt longitude 15° 20′, and north latitude 40° 40′.

CAPPARIS, *caper*, in botany, a genus of the polyandria-monogynia claſs of plants, the corolla of which conſiſts of four roundiſh, emarginated, open petals: the fruit is a carnoſe, turbinated capſule, with only one cell, containing numerous kidney-ſhaped ſeeds. See plate XXXVI. fig. 3. and the article CAPER.

CAPRA, the GOAT, in zoology, conſtitutes a genus of quadrupeds, of the order of the *pecora*, diſtinguiſhed from the other genera of this order, by their hollow, rough, and erect horns, which bend a little backwards.

Of this genus authors enumerate a great many ſpecies, as the common goat; the *rupicapra*, or chamois-goat; the *ibex*; the *gazella*; and ſeveral others: for a deſcription of which, ſee the articles GOAT, RUPICAPRA, &c.

CAPRA, in aſtronomy, an appellation given to the ſtar capella, and ſometimes alſo to the conſtellation capricorn. See the articles CAPELLA and CAPRICORN.

CAPRA SALTANS, in meteorology, a fiery meteor, or exhalation, which ſometimes appears in the atmoſphere: the exhalation is not a ſtraight line, but inflected, conſiſting of windings in and out, reſembling the capering of a goat.

CAPRAIA, an iſland on the coaſt of Tuſcany, about thirty miles ſouth-weſt of Leghorn; eaſt long. 11°, and north lat. 43° 15′.

CAPRARIA, in botany, a genus of the didynamia-angioſpermia claſs of plants, the flower of which conſiſts of a ſingle, concave petal, divided into four ſegments: the fruit is an oblong conic capſule, formed of two valves, and containing only one cell, where there are a great number of ſeeds of an oblong form.

CAPRAROLA, a town of St. Peter's patrimony, in Italy, about twenty miles north of the city of Rome, and eight ſouth of Viterbo: eaſt longit. 13°, and north latitude 42° 30′.

It is a biſhop's ſee.

CAPRI, or CAPREA, a city and iſland at the entrance of the gulph of Naples, about twenty miles ſouth of that city: eaſt longit. 14° 50′, and north latitude 40° 45′.

The iſland is only four miles long, and one broad; the city is a biſhop's ſee, ſituated on a high rock, at the weſt end of the iſland.

CAPRICE, in muſic, a term applied to certain pieces, in which the compoſer gives a looſe to his fancy, and not being confined either to particular meaſures, or keys, runs diviſions according to his mind, without any premeditation.

CAPRICE, in architecture, an appellation given to buildings of a peculiar taſte, and deviating from the received rules of that art.

CAPRICORN-BEETLE, the engliſh name of a ſpecies of *cerambyx*, with antennæ ſomewhat reſembling goat's horns. See plate XXXVI. fig. 4.

CAPRICORN, in aſtronomy, one of the twelve ſigns of the zodiac, repreſented on globes in the form of a goat, and characteriſed in books by this mark ♑.

It is the tenth ſign in order, and contains twenty-eight ſtars, according to Ptolemy and Tycho Brahe; twenty-nine, according to Hevelius; and fifty-one, according to Flamſtead.

Tropic of CAPRICORN, a leſſer circle of the ſphere, which is parallel to the equinoctial, and at 23° 30′ diſtance from it ſouthwards.

CAPRIFICATION, a method uſed in the Levant, for ripening the fruit of the domeſtic fig-tree, by means of inſects bred in that of the wild fig tree.

It is ſaid that theſe figs will never come to maturity, unleſs wounded by the inſects depoſiting their eggs. Poſſibly the reaſon

of

of this effect, may be their lacerating the veſſels of the fruit, and thereby deriving thither a greater quantity of nutricious juice.

Plums and pears, wounded in the ſame manner, are found to ripen ſooneſt, and the pulp about the wound has a more exquiſite taſte than the reſt.

CAPRIMULGUS, the GOAT-SUCKER, in ornithology, a ſpecies of *birundo*, with an undivided tail, and briſtles at the mouth, erroneouſly called the churn-owl, or fern-owl. See the article HIRUNDO.

CAPRIOLES, in the manege, leaps that a horſe makes in the ſame place, without advancing, in ſuch a manner, that when he is at the height of the leap, he jerks out with his hinder legs even and near. It is the moſt difficult of all the high manege. It differs from a croupade in this, that in a croupade the horſe does not ſhew his ſhoes; and from a ballotade, becauſe in this he does not jerk out. To make a horſe work well at caprioles, he muſt be put between two pillars, and taught to raiſe firſt his fore-quarters, and then his hind-quarters, while his fore are yet in the air, for which end you muſt give the whip, and the poinſon.

CAPSICUM, GUINEA PEPPER, in botany, a genus of the pentandria-monogynia claſs of plants, the flower of which is a rotated petal, with a ſhort tube, a patent plicated limb, divided into five broad and ſharp pointed ſegments: the fruit is a berry without pulp, approaching to an oval figure, with two hollow and coloured cells, containing numerous and compreſſed ſeeds, of a kidney ſhape. Guinea-pepper is more uſed as a ſauce and pickle, than in phyſic.

CAPSQUARES, in gunnery, ſtrong plates of iron which come over the trunnions of a gun, and keep it in the carriage.

They are faſtened by a hinge to the prize-plate, that they may lift up and down, and form a part of an arch, in the middle to receive a third part of the thickneſs of the trunnions: for two thirds are let into the carriage, and the other end is faſtened by two iron wedges, called the forelocks and keys.

CAPSTAN, or MAIN-CAPSTAN, in a ſhip, a great piece of timber in the nature of a windlaſs, placed next behind the main-maſt, its foot ſtanding in a ſtep on the lower deck, and its head between the upper decks; formed into ſeveral ſquares with holes in them. Its uſe is to weigh the anchors, to hoiſe up or ſtrike down top-maſts, to heave any weighty matter, or to ſtrain any rope that requireth a main force.

Jear CAPSTAN is placed between the main-maſt and the mizen, and ſerves to ſtrain any rope, heave upon the jear-rope or upon the viol, or hold off by at the weighing of an anchor.

CAPSTAN-BARS, the pieces of wood that are put into the capſtan holes, to heave up any thing of weight into the ſhip.

Pawl of a CAPSTAN, a ſhort piece of iron made faſt to the deck, and reſting upon the whelps, to keep the capſtan from recoiling, which is of dangerous conſequence.

Whelps of a CAPSTAN are ſhort pieces of wood, made faſt to it, to keep the cable from coming too nigh, in turning it about.

Pawling the CAPSTAN, is ſtopping it from turning by means of the pawl.

Come up CAPSTAN, or *launch out the* CAPSTAN, that is, ſlacken the cable which you heave by.

CAPSULATE, or CAPSULATED PLANTS, thoſe furniſhed with capſules for the reception of their ſeeds.

CAPSULE, *capſula*, in a general ſenſe, denotes a receptacle, or cover, in form of a bag.

CAPSULE, among botaniſts, a ſpecies of pericarpium, or ſeed-veſſel, compoſed of ſeveral dry, elaſtic valves, which uſually burſt open at the points, when the ſeeds are ripe: it differs from a pod, in being roundiſh and ſhort. See the article POD. This kind of pericarpium ſometimes contains one cell or cavity, ſometimes more: in the firſt caſe it is called unilocular, as it is bilocular, trilocular, *&c.* when it contains two, three, *&c.* cells or cavities.

CAPSULA, in chemiſtry, an earthen pan for holding things that are to undergo violent operations of the fire.

CAPSULA-COMMUNIS, in anatomy, called alſo *capſula Gliſſonii*, from its diſcoverer, is a tunic continuous with the peritonæum, and includes the branches of the vena porta and biliary ducts as they approach the liver, as well as within it.

CAPSULA-CORDIS. See PERICARDIUM.

CAPSULÆ ATRABILIARIÆ, called alſo *glandulæ renales*, and *renes ſuccenturiati*, are two yellowiſh glands of a compreſſed figure, lying on each ſide of the upper part of the kidneys. They have a very narrow cavity, imbued with a browniſh liquor of a ſweetiſh taſte. Their figure is irregular, between ſquare, triangular, and

and oval. Their ſize alſo is various; but in adults, they are in general about the bigneſs of a large nux vomica. In the fœtus, they are larger, and often exceed the kidneys themſelves in ſize. The membrane that ſurrounds them is very thin: it cloſely involves their whole ſubſtance, and connects them with the kidneys. Their blood-veſſels are ſometimes ſent from the aorta and the vena cava, but more frequently from the emulgents: their nerves are from the plexus renalis, and their lymphatic veſſels are numerous. There is no excretory duct diſcovered in them, and their uſe is therefore not certainly known. By their great ſize in the fœtus, they ſeem deſtined rather to the ſervice of that ſtate, than of any other.

CAPSULÆ SEMINALES, are the extreme parts of the vaſa deferentia, which have their cavities dilated in manner of capſules. Their uſe is to tranſmit the ſemen from the teſtes to the veſiculæ ſeminales.

CAPTAIN, a military officer, whereof there are various kinds, according to their commands.

CAPTAIN *of a troop or company*, an inferior officer, who commands a troop of horſe, or company of foot, under a colonel. In the ſame ſenſe we ſay, captain of dragoons, of grenadiers, of marines, of invalids, *&c.*

In the horſe and foot guards, the captains have the rank of colonels.

CAPTAIN *general*, he who commands in chief.

CAPTAIN *lieutenant*, he who with the rank of captain, but the pay of lieutenant, commands a troop or company in the name and place of ſome other perſon who is diſpenſed with on account of his quality from performing the functions of his poſt.

Thus the colonel, being uſually captain of the firſt company of his regiment; that company is commanded by his deputy, under the title of captain-lieutenant.

So in England, as well as in France, the king, queen, dauphin, princes, *&c.* have uſually the title of captains of the guards, *gens d' armes*, *&c.* the real duty of which offices is performed by captain-lieutenants.

CAPTAIN *reformed*, one who, upon the reduction of the forces, has his commiſſion and company ſuppreſſed; yet is continued captain, either as ſecond to another, or without any poſt or command at all.

CAPTAIN *of militia*, he who commands a company of the militia, or trained bands. See the article MILITIA.

CAPTAIN *of a ſhip of war*, the commanding officer of a ſhip, galley, fire-ſhip, or the like. This officer ranks with a colonel in the land ſervice.

CAPTAIN *of a merchant ſhip*, he who has the direction of the ſhip, her crew, and lading, *&c.* In ſmall ſhips and ſhort voyages, he is more ordinarily called the maſter. In the Mediterranean, he is called the patroon.

The proprietor of the veſſel appoints the captain or maſter, and he is to form the crew, and chooſe and hire the pilots, mates, and ſeamen; though, when the proprietor and maſter reſide on the ſame ſpot, they generally act in concert together.

CAPTAIN BASHAW, or CAPONDAN BASHAW, in the polity of the Turks, ſignifies the turkiſh high admiral. He poſſeſſes the third office of the empire, and is inveſted with the ſame power at ſea, that the vizir has on ſhore. Solyman II. inſtituted this office in favour of the famous Barbaroſſa, with abſolute authority over the officers of the marine and arſenal, whom he may puniſh, caſheer, or put to death, as ſoon as he is without the Dardanelles. He commands in chief in all the maritime countries, cities, caſtles, *&c.* and, at Conſtantinople, is the firſt magiſtrate of police in the villages on the ſide of the Porte, and the canal of the Black Sea. The mark of his authority is a large indian cane, which he carries in his hand, both in the arſenal and with the army.

The captain-baſhaw enjoys two ſorts of revenues; the one fixed, the other caſual. The firſt ariſe from a capitation of the iſlands in the Archipelago, and certain governments in Natolia and Galipoli. The latter conſiſt in the pay of the men, who die during a campaign; in a fifth of all prizes, made by the begs; in the profits accruing from the labour of the ſlaves, whom he hires as rowers to the grand ſignior; and in the contributions he exacts in all places where he paſſes.

CAPTAINRY, in the french cuſtoms, the office of keeper of a royal palace, or ranger of a chace, foreſt, *&c.*

CAPTION, in law, is where a commiſſion is executed, and the commiſſioners ſubſcribe their names to a certificate, declaring when and where the commiſſion was executed. It relates chiefly to commiſſions,

miſſions, to take anſwers in chancery, and depoſitions of witneſſes, and take fines of lands, &c.

CAPTION and HORNING, in the law of Scotland. When a decreet or ſentence is obtained againſt any perſon, the obtainer thereof takes out a writ, whereby the party decerned is charged to pay or fulfil the will of the decreet, under the pain of rebellion: this writ is called letters of horning. If he refuſe to comply, then the writ or letters of caption may be raiſed, whereby all the inferior judges and magiſtrates are commanded to aſſiſt in apprehending the rebel, and putting him in priſon.

CAPTIVE, a ſlave or perſon taken by the enemy in war, or by a pirate or corſair. See the articles SLAVE and PIRATE.

The Romans led their captives in triumph, and, by the cornelian law, the latter wills of thoſe Romans, who died in the hands of an enemy, were comfirmed in the ſame manner, as if they had been free, although that will had been made, before the perſon marched out of the city to war.

Captive, in modern hiſtory, more particularly denotes a chriſtian ſlave, taken by the piratical ſtates of Barbary.

The fathers of la Merci and the Mathurins in France are employed in redeeming theſe captives; and, in England, a ſtatute was made for the relief of captives, taken by turkiſh and other pirates, in 16 and 17 of Car. II.

CAPTIVITY, a puniſhment which God inflicted upon his people, for their vices and infidelities. The firſt of theſe captivities is that of Egypt, from which Moſes delivered them; after which, are reckoned ſix during the government of the judges: but the greateſt and moſt remarkable, were thoſe of Judah and Iſrael, which happened under the kings of each of theſe kingdoms. It is generally believed, that the ten tribes of Iſrael never came back again after their diſperſion; and Joſephus and St. Jerom are of this opinion: nevertheleſs, when we examine the writings of the prophets, we find the return of Iſrael from captivity pointed out in a manner, almoſt as clear as that of the tribes of Benjamin and Judah. See Hoſea i. 10, xi. 12. Amos ix. 14. Iſaiah xi. 13 and 14. Ezekiel xxxvii. 16, &c.

The captivities of Judah are generally reckoned four; the fourth and laſt of which fell out in the year of the world 3416 under Zedekiah; and from this period begin the ſeventy years captivity, foretold by Jeremiah.

Since the deſtruction of the temple by the Romans, the Hebrews boaſt, that they have always had their heads, or particular princes, whom they call princes of the captivity, in the eaſt and weſt. The princes of the captivity in the eaſt governed the Jews, who dwelt at Babylon, in Chaldæa, Aſſyria and Perſia; and the prince of the captivity in the weſt governed thoſe, who dwelt in Judæa, Egypt, Italy, and in other parts of the roman empire. He, who reſided in Judæa, took up his abode commonly at Tiberias, and aſſumed the title of Roſchabboth, head of the fathers or patriarchs. He preſided in aſſemblies, decided in caſes of conſcience, levied taxes for the expences of his viſits, and had officers under him, who were diſpatched through the provinces, for the execution of his orders. As to the princes of the captivity of Babylon, or the eaſt, we know neither the original nor ſucceſſion of them; it appears only, that they were not in being before the end of the ſecond century.

CAPTURE ſignifies, particularly, prizes taken by privateers, in time of war, which are to be divided between the captors. See the article PRIZE.

CAPUA, a city of the province of Lavoro, in the kingdom of Naples, ſituated on the river Volturno, about fifteen miles north-weſt of the city of Naples; eaſt long. 15°, and north lat. 41° 20′.

It is the ſee of an archbiſhop.

CAPUCHINS, in the church of Rome, the ſame with franciſcans. See the article FRANCISCANS.

CAPUT, the HEAD, in anatomy. See the article HEAD.

CAPUT DRACONIS, the DRAGON'S HEAD, in aſtronomy, the aſcending node of the moon. See the article NODE.

Caput draconis is alſo a ſtar of the firſt magnitude, in the head of the conſtellation draco. See the article DRACO.

CAPUT GALLINAGINIS, in anatomy, a kind of ſeptum, or ſpongeous border at the extremities of the apertures of each of the veſiculæ ſeminales, ſerving to hinder the ſeed, coming from one ſide, from ruſhing upon, and ſo ſtopping the diſcharge of the other.

Some will have its uſe to be, to prevent the impulſe of the ſeed from dilating the orifices of the veſiculæ, and ſo ouzing out, except when aſſiſted by the compreſ-

and oval. Their ſize alſo is various; but in adults, they are in general about the bigneſs of a large nux vomica. In the fœtus, they are larger, and often exceed the kidneys themſelves in ſize. The membrane that ſurrounds them is very thin: it cloſely involves their whole ſubſtance, and connects them with the kidneys. Their blood-veſſels are ſometimes ſent from the aorta and the vena cava, but more frequently from the emulgents: their nerves are from the plexus renalis, and their lymphatic veſſels are numerous. There is no excretory duct diſcovered in them, and their uſe is therefore not certainly known. By their great ſize in the fœtus, they ſeem deſtined rather to the ſervice of that ſtate, than of any other.

CAPSULÆ SEMINALES, are the extreme parts of the vaſa deferentia, which have their cavities dilated in manner of capſules. Their uſe is to tranſmit the ſemen from the teſtes to the veſiculæ ſeminales.

CAPTAIN, a military officer, whereof there are various kinds, according to their commands.

CAPTAIN *of a troop or company*, an inferior officer, who commands a troop of horſe, or company of foot, under a colonel. In the ſame ſenſe we ſay, captain of dragoons, of grenadiers, of marines, of invalids, *&c.*

In the horſe and foot guards, the captains have the rank of colonels.

CAPTAIN *general*, he who commands in chief.

CAPTAIN *lieutenant*, he who with the rank of captain, but the pay of lieutenant, commands a troop or company in the name and place of ſome other perſon who is diſpenſed with on account of his quality from performing the functions of his poſt.

Thus the colonel, being uſually captain of the firſt company of his regiment; that company is commanded by his deputy, under the title of captain-lieutenant.

So in England, as well as in France, the king, queen, dauphin, princes, *&c.* have uſually the title of captains of the guards, *gens d' armes*, *&c.* the real duty of which offices is performed by captain-lieutenants.

CAPTAIN *reformed*, one who, upon the reduction of the forces, has his commiſſion and company ſuppreſſed; yet is continued captain, either as ſecond to another, or without any poſt or command at all.

CAPTAIN *of militia*, he who commands a company of the militia, or trained bands. See the article MILITIA.

CAPTAIN *of a ſhip of war*, the commanding officer of a ſhip, galley, fire-ſhip, or the like. This officer ranks with a colonel in the land ſervice.

CAPTAIN *of a merchant ſhip*, he who has the direction of the ſhip, her crew, and lading, *&c.* In ſmall ſhips and ſhort voyages, he is more ordinarily called the maſter. In the Mediterranean, he is called the patroon.

The proprietor of the veſſel appoints the captain or maſter, and he is to form the crew, and chooſe and hire the pilots, mates, and ſeamen; though, when the proprietor and maſter reſide on the ſame ſpot, they generally act in concert together.

CAPTAIN BASHAW, or CAPONDAN BASHAW, in the polity of the Turks, ſignifies the turkiſh high admiral. He poſſeſſes the third office of the empire, and is inveſted with the ſame power at ſea, that the vizir has on ſhore. Solyman II. inſtituted this office in favour of the famous Barbaroſſa, with abſolute authority over the officers of the marine and arſenal, whom he may puniſh, caſheer, or put to death, as ſoon as he is without the Dardanelles. He commands in chief in all the maritime countries, cities, caſtles, *&c.* and, at Conſtantinople, is the firſt magiſtrate of police in the villages on the ſide of the Porte, and the canal of the Black Sea. The mark of his authority is a large indian cane, which he carries in his hand, both in the arſenal and with the army.

The captain-baſhaw enjoys two ſorts of revenues; the one fixed, the other caſual. The firſt ariſe from a capitation of the iſlands in the Archipelago, and certain governments in Natolia and Galipoli. The latter conſiſt in the pay of the men, who die during a campaign; in a fifth of all prizes, made by the begs; in the profits accruing from the labour of the ſlaves, whom he hires as rowers to the grand ſignior; and in the contributions he exacts in all places where he paſſes.

CAPTAINRY, in the french cuſtoms, the office of keeper of a roval palace, or ranger of a chace, foreſt, *&c.*

CAPTION, in law, is where a commiſſion is executed, and the commiſſioners ſubſcribe their names to a certificate, declaring when and where the commiſſion was executed. It relates chiefly to commiſſions,

miſſions, to take anſwers in chancery, and depoſitions of witneſſes, and take fines of lands, &c.

CAPTION and HORNING, in the law of Scotland. When a decreet or ſentence is obtained againſt any perſon, the obtainer thereof takes out a writ, whereby the party decerned is charged to pay or fulfil the will of the decreet, under the pain of rebellion: this writ is called letters of horning. If he refuſe to comply, then the writ or letters of caption may be raiſed, whereby all the inferior judges and magiſtrates are commanded to aſſiſt in apprehending the rebel, and putting him in priſon.

CAPTIVE, a ſlave or perſon taken by the enemy in war, or by a pirate or corſair. See the articles SLAVE and PIRATE.

The Romans led their captives in triumph, and, by the cornelian law, the latter wills of thoſe Romans, who died in the hands of an enemy, were comfirmed in the ſame manner, as if they had been free, although that will had been made, before the perſon marched out of the city to war.

Captive, in modern hiſtory, more particularly denotes a chriſtian ſlave, taken by the piratical ſtates of Barbary.

The fathers of la Merci and the Mathurins in France are employed in redeeming theſe captives; and, in England, a ſtatute was made for the relief of captives, taken by turkiſh and other pirates, in 16 and 17 of Car. II.

CAPTIVITY, a puniſhment which God inflicted upon his people, for their vices and infidelities. The firſt of theſe captivities is that of Egypt, from which Moſes delivered them; after which, are reckoned ſix during the government of the judges: but the greateſt and moſt remarkable, were thoſe of Judah and Iſrael, which happened under the kings of each of theſe kingdoms. It is generally believed, that the ten tribes of Iſrael never came back again after their diſperſion; and Joſephus and St. Jerom are of this opinion: nevertheleſs, when we examine the writings of the prophets, we find the return of Iſrael from captivity pointed out in a manner, almoſt as clear as that of the tribes of Benjamin and Judah. See Hoſea i. 10, xi. 12. Amos ix. 14. Iſaiah xi. 13 and 14. Ezekiel xxxvii. 16, &c.

The captivities of Judah are generally reckoned four; the fourth and laſt of which fell out in the year of the world 3416 under Zedekiah; and from this period begin the ſeventy years captivity, foretold by Jeremiah.

Since the deſtruction of the temple by the Romans, the Hebrews boaſt, that they have always had their heads, or particular princes, whom they call princes of the captivity, in the eaſt and weſt. The princes of the captivity in the eaſt governed the Jews, who dwelt at Babylon, in Chaldæa, Aſſyria and Perſia; and the prince of the captivity in the weſt governed thoſe, who dwelt in Judæa, Egypt, Italy, and in other parts of the roman empire. He, who reſided in Judæa, took up his abode commonly at Tiberias, and aſſumed the title of Roſchabboth, head of the fathers or patriarchs. He preſided in aſſemblies, decided in caſes of conſcience, levied taxes for the expences of his viſits, and had officers under him, who were diſpatched through the provinces, for the execution of his orders. As to the princes of the captivity of Babylon, or the eaſt, we know neither the original nor ſucceſſion of them; it appears only, that they were not in being before the end of the ſecond century.

CAPTURE ſignifies, particularly, prizes taken by privateers, in time of war, which are to be divided between the captors. See the article PRIZE.

CAPUA, a city of the province of Lavoro, in the kingdom of Naples, ſituated on the river Volturno, about fifteen miles north-weſt of the city of Naples; eaſt long. 15°, and north lat. 41° 20′.

It is the ſee of an archbiſhop.

CAPUCHINS, in the church of Rome, the ſame with franciſcans. See the article FRANCISCANS.

CAPUT, the HEAD, in anatomy. See the article HEAD.

CAPUT DRACONIS, the DRAGON'S HEAD, in aſtronomy, the aſcending node of the moon. See the article NODE.

Caput draconis is alſo a ſtar of the firſt magnitude, in the head of the conſtellation draco. See the article DRACO.

CAPUT GALLINAGINIS, in anatomy, a kind of ſeptum, or ſpongeous border at the extremities of the apertures of each of the veſiculæ ſeminales, ſerving to hinder the ſeed, coming from one ſide, from ruſhing upon, and ſo ſtopping the diſcharge of the other.

Some will have its uſe to be, to prevent the impulſe of the ſeed from dilating the orifices of the veſiculæ, and ſo ouzing out, except when aſſiſted by the compreſ-

ſion of the ſurrounding parts, as in copulation; but this, according to others, is rather the office of a diſtinct caruncle, placed at each orifice, and acting as a valve.

CAPUT MORTUUM, in chemiſtry, that thick, dry matter, which remains after diſtillation of any thing, but of minerals eſpecially.

It very frequently denotes only that which remains of vitriol in its diſtillation, which they call colcothar vitrioli. The caput mortuum, though in ſome caſes there be but little, if any active principle left in it, yet it is never pure: and the colcothar vitrioli, if expoſed to the air, will turn to vitriol again. The caput mortuum, called alſo terra damnata, is found in form of a friable, porous matter, without taſte or ſmell: it is ranked among the chemical elements, and ſuppoſed to conſtitute the dry, fixed, earthy, and ſolid part of all bodies whatever. It is what the chemiſts call a paſſive element or principle, ſerving as the baſis or ſupport of the active ones.

CAPY-BARA, in zoology, the thick-headed hippopotamus, with no tail: it is a native of Braſil, and called porcus fluviatilis, the river-hog, from the reſemblance it bears to the hog-kind. See the article HIPPOPOTAMUS.

CAR, or CARR. See the article CARR.

CARABINE, a fire-arm, ſhorter than a muſket, carrying a ball of twenty-four in the pound, borne by the light horſe, hanging at a belt over the left ſhoulder.

The barrel is two feet and a half long, and is ſometimes furrowed ſpirally within, which is ſaid to add to the range of the piece.

CARABINEERS, or CARABINIERS, regiments of light horſe, carrying longer carabines than the reſt, and uſed ſometimes on foot.

CARABUS, in zoology, a genus of four-winged flies, the antennæ of which are oblong, ſlender, and ſetaceous; and the thorax is ſomewhat convex, marginated, of a cordated figure, and truncated in the hinder part.

Authors enumerate a great many ſpecies of this inſect, diſtinguiſhed by their different colours, and other peculiarities.

CARACAOS, or CARASSOW, a town on the coaſt of Terra Firma, in South America; weſt long. 67°, north lat. 10° 10′.

CARACARA, in zoology, a braſilian ſpecies of falco, the back of which is of a pale-brown colour, variegated in an elegant manner with ſpots of white and yellow. See the article FALCO.

This is one of the moſt beautiful of the hawk kind: it is about the bigneſs of a tame pigeon; the head is ſmall, the beak is broad at the baſe, but ſhort, and conſiderably hooked; the tail is long and beautifully faſciated, with tranſverſe broad lines, of white and brown, placed in an alternate order. See plate XXXVI. fig. 6.

CARACOL, in the manege, the half turn which a horſeman makes, either to the right or left.

In the army, the horſe always make a caracol after each diſcharge, in order to paſs to the rear of the ſquadron.

CARACOL, in architecture, denotes a ſtair-caſe in a helix or ſpiral form.

CARACOLI, a factitious metal, of which the natives of the Caribbee iſlands, or the leſſer Antilles, make a ſort of ornament in the form of a creſcent, which they alſo call caracoli.

This metal comes from the main land; and the common opinion is, that it is a compound of ſilver, copper and gold, ſomething like the corinthian braſs among the antients. Theſe metals are ſo perfectly mixed and incorporated together, that the compound which reſults from them, it is ſaid, has a colour that never alters, how long ſoever it remains in the ſea, or under ground. It is ſomething brittle, and they who work at it, are obliged to mix a large proportion of gold with it, to make the compound more tough and malleable.

CARACT, CARAT, CARRAT, the name of that weight which expreſſes the degree of fineneſs that gold is of.

The mint-maſter, or cuſtom, have fixed the purity of gold at 24 caracts; though it is not poſſible ſo to purify and refine that metal, but it will want ſtill about one fourth part of a caract in abſolute purity and perfection. The caract is divided into $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$, and $\frac{1}{32}$. Theſe degrees ſerve to diſtinguiſh the greater or leſſer quantity of alloy therein contained: for inſtance, gold of 22 caracts, is that which has two parts of ſilver, or of any other metal, and 22 of fine gold.

CARACT is alſo a certain weight which goldſmiths and jewelers uſe wherewith to weigh precious ſtones and pearls.

This caract weighs four grains, but ſomething lighter than the grains of other weights.

weights. Each of these grains is subdivided into $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$, &c.

CARAITES, in the ecclesiastical history of the Jews, a religious sect among that people, who adhere closely to the text and letter of the scriptures, rejecting the rabbinical interpretations, and the cabbala.

The caraites pass for the most learned of the jewish doctors; they are chiefly to be met with in Poland, Muscovy, and the east: they are but few in comparison of the bulk of the Jews, who are of the party of the rabbins: the latter have so great an aversion for the caraites, that they will have no alliance, nor even conversation, with them: they treat them as bastards; and if a caraite would turn rabbinist, the other Jews would not receive him. See the article CABBALA.

CARAMANIA, a province of Natolia, in Asia, situated on the Mediterranean sea, opposite to the island of Cyprus.

CARAMANTA, the name of a province of South America, bordered on the north by the district of Carthagena; on the east, by new Grenada; and on the south and west, by Popayan.

This is also the name of the capital of that province, situated in 5° 18′ north lat.

CARANNA, a vegetable production, whose inflammability and solubility in oil, prove it to be truly a resin, though some call it a gum.

It is brought to us principally from New Spain, and is to be chosen clean, of a dark colour, and bitterish taste.

This resin affords, by distillation, a fine odoriferous oil, which is esteemed, as well as the resin itself, a very powerful external remedy, in cases of pain, tumours, and wounds of the nerves. It is even used by some in the gout and sciatica. It is made into a plaster, with the addition of Chio-turpentine, and oil of mace, which is applied to the stomach in cases of indigestions, and to the head for the cure of inveterate pains there.

CARAVAN, or CARAVANNE, in the east, signifies a company or assembly of travellers and pilgrims, and more particularly of merchants, who for their greater security, and in order to assist each other, march in a body through the deserts, and other dangerous places, which are infested with Arabs, or robbers.

There is a chief, or aga, who commands the caravan, and is attended by a certain number of janasaries, or other militia, according to the countries from whence the caravans set out; which number of soldiers must be sufficient to defend them, and conduct them, with safety, to the places for which they are designed, and on a day appointed. The caravan encamps every evening near such wells or brooks, as their guides are acquainted with; and there is a strict discipline observed upon this occasion, as in armies in time of war. Their beasts of burden are partly horses, but most commonly camels, who are capable of undergoing a very great fatigue.

The grand signior gives one fourth of the revenues of Egypt to defray the expence of the caravan that goes yearly to Mecca to visit Mahomet's tomb: the devotees in this caravan are from forty to seventy thousand, accompanied with soldiers to protect them from the pillage of the arabs, and followed by eight or nine thousand camels, laden with all necessary provisions for so long a passage across deserts.

CARAVAN is also used for the voyages or campaigns which the knights of Malta are obliged to make at sea against the Turks and Corsairs, that they may arrive at the commandaries or dignities of the order.

The reason of their being thus called, is because the knights have often seized the caravans going from Alexandria to Constantinople.

CARAVANIER, a person who leads the camels, and other beasts of burden, who are commonly used in the caravans in the East.

CARAVANSERA, or KARAVANSERA, a large public building, or inn, appointed for receiving and lodging the caravans. It is commonly a large square building, in the middle of which there is a very spacious court; and under the arches or piazzas that surround it, there runs a bank, raised some feet above the ground, where the merchants, and those who travel with them in any capacity, take up their lodgings, as well as they can: the beasts of burden being tied to the foot of the bank. Over the gates, that lead into the court, there are sometimes little rooms, which the keepers of the caravanseras let out, at a very high price, to such as have a mind to be private.

The caravanseras in the east, are something in the nature of the inns in Europe, only that you meet with little accommodation either for man or beast, but are obliged to carry almost every thing with

you: there is never a caravanſera without a well, or ſpring of water. Theſe buildings are chiefly owing to the charity of the mahometans: they are eſteemed ſacred dwellings, where it is not permitted to inſult any perſon, or to pillage any of the effects that are depoſited there. They even carry their precautions ſo far, as not to ſuffer any man who is not married to lodge there; becauſe they are of opinion, that a man who has no wife, is more dangerous than another.

CARAVANSERASKIER, the ſteward, or keeper of a caravanſera.

He keeps an account of all the merchandizes that are ſold upon truſt, and demands the payments of the ſums due to the merchants, for what has been ſold in the caravanſera, on the ſeller's paying two *per cent.*

CARAWAY, or CARRAWAY, the engliſh name of the carum of botaniſts. See the article CARUM.

CARBUNCLE, in natural hiſtory, a very elegant gem, whoſe colour is deep red, with an admixture of ſcarlet.

This gem was known among the antients by the name of anthrax. It is uſually found pure and faultleſs, and is of the ſame degree of hardneſs with the ſapphire: it is naturally of an angular figure, and is found adhering, by its baſe, to a heavy and ferrugineous ſtone of the emery-kind: its uſual ſize is near a quarter of an inch in length, and two thirds of that in diameter in its thickeſt parts: when held up againſt the ſun, it loſes its deep tinge, and becomes exactly of the colour of a burning charcoal, whence the propriety of the name which the antients gave it. It bears the fire unaltered, not parting with its colour, nor becoming at all the paler by it. It is only found in the Eaſt-Indies, ſo far as is yet known, and there but very rarely.

CARBUNCLE, or ANTHRAX, in ſurgery, an inflammation which ariſes, in time of the plague, with a veſicle or bliſter, almoſt like thoſe produced by burning. This inflammation, for the moſt part, terminates in a ſphacelus, and putrifies the ſubjacent parts down to the bone, they becoming as black as a coal. A carbuncle always breaks out very ſpeedily, even in the ſpace of an hour or two, attended with heat and pain: as ſoon as it is opened, it diſcharges a livid ſanies, or ſometimes a limpid water: it is black within, which is a ſign that the ſphacelus has ſeized the ſubjacent parts, and is making its progreſs: but the putrid fleſh in thoſe who recover, ſuppurates, and parts from the ſound. The ſize of theſe peſtilential bliſters is various, more or leſs; as is alſo their number in the patient; for there is no part of the body which they do not infeſt, and they generally appear in company with bubos. See the article BUBO.

Theſe carbuncles which ariſe in the face, neck, breaſt, or armpits, are obſerved to be of the worſt kind, for they generally kill the patient. As to the internal treatment of carbuncles, the very ſame is to be obſerved in this caſe, as has been recommended under the article *peſtilential* BUBOS.

In the external treatment, ſome of the modern phyſicians uſe only ſcarification in this caſe, with very good ſucceſs; others only open the eruptions with a pair of ſciſſars, and having diſcharged the matter, they frequently waſh the carbuncle with *ſp. vin. camph.* or *ſp. vin.* wherein has been digeſted a little theriaca: they afterwards apply a maturating cataplaſm, which is to be continued till the carbuncle ſeparates from the ſound parts; then they cut it out all at once.

CARBUNCLE, in heraldry, a charge or bearing, conſiſting of eight radii, four whereof make a common croſs, and the other four a ſaltier.

Some call theſe radii buttons, or ſtaves, becauſe round, and enriched with buttons, or pearled like pilgrims ſtaves, and frequently tipped or terminated with flower-de-luces: others blazon them, royal ſceptres, placed in ſaltier, pale and feſſe.

CARCASE, *cadaver*, the body of a dead animal, eſpecially a brute; that of the human ſpecies being called corps.

It is well known, that fleſh, as well as blood, is ſpecifically heavier than water; and yet dead bodies, after lying ſome time at the bottom, are always found to float: a circumſtance undoubtedly owing to air generated in the bowels by putrefaction, whereby the body is buoyed up. See the articles FERMENTATION and PUTREFACTION.

CARCASE, in architecture, the ſhell or ribs of a houſe, containing the partitions, floors, and rafters, made by carpenters; or it is the timber-work (or as it were the ſkeleton) of a houſe, before it is lathed and plaſtered; it is otherwiſe called the framing.

CARCASSE, or CARCUSS, in the art of war,

war, an iron-caſe or hollow capacity, about the bigneſs of a bomb, of an oval figure, made of ribs of iron, filled with combuſtible matters, as meal powder, ſalt-petre, ſulphur, broken glaſs, ſhavings of horns, turpentine, tallow, &c. the deſign of it is to be thrown out of a mortar to ſet houſes on fire, and do other execution. It has two or three apertures through which the fire is to blaze.

CARCASSONE, a town of Languedoc, in France, ſituated on the river Ande, about twenty-five miles weſt of Narbonne: eaſt long. 2°, north lat. 43° 20′.

It is a biſhop's ſee.

CARCERES, in the antient circenſian games, were incloſures, in the circus, wherein the horſes were reſtrained till the ſignal was given for ſtarting, when, by an admirable contrivance, they all at once flew open.

CARCINOMA, καρκινωμα, among phyſicians, the ſame with cancer. See the article CANCER.

CARCUSS, or CARCASSE. See the article CARCASSE.

CARD, among artificers, an inſtrument conſiſting of a block of wood, beſet with ſharp teeth, ſerving to arrange the hairs of wool, flax, hemp, and the like: there are different kinds of them, as hand-cards, ſtock-cards, &c.

CARDS, among gameſters, little pieces of fine thin paſteboard of an oblong figure, of ſeveral ſizes, but moſt commonly in England three inches and an half long, and two and an half broad, on which are painted ſeveral points and figures.

The moulds and blocks for making cards, are exactly like thoſe that were uſed for the firſt books: they lay a ſheet of wet or moiſt paper on the block, which is firſt ſlightly done over with a ſort of ink made with lamb-black diluted in water, and mixed with ſome ſtarch to give it a body. They afterwards rub it off with a round liſt. The court-cards are coloured by means of ſeveral patterns, ſtiled ſtane-files. Theſe conſiſt of papers cut through with a pen-knife, and in theſe apertures, they apply ſeverally the various colours, as red, black, &c. Theſe patterns are painted with oil-colours, that the bruſhes may not wear them out; and when the pattern is laid on the paſteboard, they ſlightly paſs over it a bruſh full of colour, which, leaving it within the openings, forms the face or figure of the card.

Cards, upon ſufficient ſecurity, may be exported without payment of the ſtamp duty; but for every pack ſold without the label of the ſtamp office, in England, there is a penalty of 10 l.

CARDAMINE, LADY'S SMOCK, in botany, a genus of the tetradynamia-ſiliquoſa claſs of plants, the corolla of which, conſiſting of four petals, is cruciform: theſe petals are oval, oblong, open, and terminating in erect ungues of double the length of the cup: the fruit is a long pod, of a compreſſed, cylindric ſhape, compoſed of two valves, and containing two cells, wherein are ſeveral roundiſh ſeeds.

CARDAMOM, *cardamomum*, in the materia medica, is diſtinguiſhed into three kinds, excluſive of the amomum, which is evidently of the cardamom kind. They are called by the names of the great cardamom, or grain of paradiſe; the long or middle cardamom, and the leſſer common cardamom of the ſhops.

The great cardamom is a large and oblong fruit, in ſhape and ſize much reſembling a common fig, as growing on the tree, and not ripe: the ſeeds are ſmaller than pepper-corns, of an irregular angular figure; but the plant is not known.

The fruit of the middle cardamom is of an oblong and triangular figure, containing three diſtinct cells, wherein are ſeeds of an oblong, angular, and irregular form: the plant producing this ſeed, is ſaid to be of the ſame genus with the ſmall or common cardamom.

The fruit of the leſſer cardamom is ſhort, and of a trigonal form. It has three cells, containing ſeeds much like thoſe of the middle cardamom.

This cardamom aſſiſts digeſtion, and ſtrengthens the head and ſtomach: it is alſo a diuretic and carminative, and promotes the menſes. It is ſeldom preſcribed alone, unleſs for chewing, at the perſon's diſcretion.

CARDIA, in natural hiſtory, a genus of ſhell fiſh, the ſhell of which is formed of two ovals, and reſembles the figure of a heart at cards: the valves are equal and gibboſe.

Of this genus there are ſeveral ſpecies, ſome nearly globoſe, others of a triangular figure, and others irregularly oblong. Under this genus are comprehended the cockles, ark ſhells, &c. together with the *pectines inaurili*, or ſcallops without ears, as they are called. See the articles COCKLE, SCALLOP, &c.

CARDIAC, an appellation given to ſuch medicines

medicines as preſerve or increaſe the ſtrength of the heart, and by that means the vital forces, though they do not immediately work upon the heart, nor are particularly appropriated to the corroboration of that part. This effect they perform either by repleniſhing the exhauſted veſſels with good humours, or exciting motion where it is required. Therefore nutritives duly choſen with reſpect to particular conſtitutions, belong to this claſs, as well as aſtringent corroboratives and ſtimulants. All the modern diſpenſatories are full of cardiacs or cordials, both of the dry and liquid kind; but the beſt are thoſe which remove the diſorder, of which lowneſs of ſpirits is the conſequence: and next to theſe is wine, which adminiſtered in proper quantities, and more or leſs diluted as circumſtances require, will generally anſwer better purpoſes than more pompous cordials, whilſt it is leſs capable of doing miſchief.

CARDIACUS PLEXUS, in anatomy, a plexus or piece of net-work, formed of a ramification of the par vagum, or eighth pair of nerves.

CARDIALGIA, the HEART-BURN, in medicine, a diſorder of the ſtomach attended with anxiety, a nauſea, and often a reaching or actual vomiting.

The cauſes of this diſorder, are either vitiated humours in the ſtomach, which occaſion a nauſea and vomiting, or in the common heart-burns, wind, indigeſtion, and now and then worms. But more frequently a cardialgia proceeds from congeſtions of blood about the ſtomach, which happen to thoſe who are full of blood, but more eſpecially to hypochondriac and hyſterical perſons.

The cure of a common heart-burn from indigeſtion, and the acrimony of the contents of the ſtomach, may be performed by drinking tea, or a decoction of camomile flowers; as alſo by taking bitters, or the teſtaceous and abſorbent powders. When it ariſes from a crapula, gentle emetics will be uſeful; and if it proceeds from a congeſtion of blood, bleeding will be convenient, after which antiſpaſmodics are to be given.

If it is occaſioned by acute ſtomachic fevers, rhubarb or ipecacuanha, in a moderate doſe, may be preſcribed; and if by worms, it muſt be treated with medicines proper for killing worms.

CARDIFF, a borough-town of Glamorganſhire, in ſouth Wales, ſituated on the river Taye, about two miles ſouth-eaſt of Landaff; weſt longitude 3° 20′, north latitude 51° 30′.

It ſends only one member to parliament.

CARDIGAN, the capital of Cardiganſhire, near the mouth of the river Tivy and the iriſh channel, about thirty miles north of Pembroke; weſt long. 4° 40′, north lat. 52° 15′.

It gives the title of earl to the noble family of Brudenel, and ſends only one member to parliament.

CARDINAL, in a general ſenſe, an appellation given to things on account of their preheminence: thus we ſay, cardinal winds, cardinal virtues, &c.

The cardinal virtues are theſe four, juſtice, prudence, temperance, and fortitude, upon which all the reſt hinge.

CARDINAL POINTS, in coſmography, are the four interſections of the horizon with the meridian, and the prime vertical circle. See the article POINT.

Of theſe two, *viz.* the interſections of the horizon and meridian are called north and ſouth, with regard to the poles they are directed to. See the article MERIDIAN.

The other two, *viz.* the interſections of the horizon and firſt vertical, are called eaſt and weſt. The cardinal points therefore coincide with the four cardinal regions of the heavens, and are 90° diſtant from each other. The intermediate points are called collateral points.

CARDINAL POINTS of a cativity, are the riſing and ſetting of the ſun, the zenith and nadir.

CARDINAL WINDS, theſe that blow from the cardinal points.

CARDINAL SIGNS in the zodiac, are Aries, Libra, Cancer, and Capricorn.

CARDINAL NUMBERS, in grammar, are the numbers, one, two, three, &c. which are indeclinable, in oppoſition to the ordinal numbers, firſt, ſecond, third, &c. See the article NUMBER.

CARDINAL, more particularly, ſignifies an eccleſiaſtical prince in the romiſh church, being one who has a voice in the conclave at the election of a pope. The cardinals were originally nothing more than deacons, to whom was intruſted the care of diſtributing the alms to the poor of the ſeveral quarters of Rome; and as they held aſſemblies of the poor in certain churches of their ſeveral diſtricts, they took the title of theſe churches. They began to be called cardinals in the year 300, during the pontificate of St. Sylveſter, by which appellation was meant the

Fig. 1. CARDUUS, *THISTLE.*



Fig. 2. CARIGUEIA.



Fig. 3. CARLINE *THISTLE.*

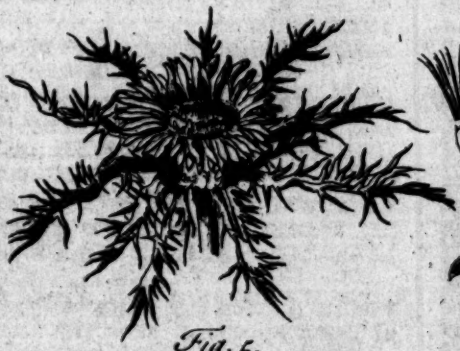


Fig. 4. CARTHAMUS.



Fig. 5.
CARYOPHYLLUS.



Fig. 6. CASSOWARY.



Fig. 7. CASTOR, *BEAVER.*



J. Jefferys sculp.

BRITISH MUSEUM

the chief prieſts of a pariſh, and next in dignity to a biſhop. This office grew more conſiderable afterwards, and by ſmall degrees arrived at its preſent height, in which it is the reward of ſuch as have ſerved his holineſs well, even princes thinking it no diminution of their honour, to become members of the college of cardinals.

The cardinals compoſe the pope's council, and till the time of Urban VIII. were ſtiled *moſt illuſtrious*; but by a decree of that pope in 1630, they had the title of *eminence* conferred upon them.

At the creation of a new cardinal, the pope performs the ceremony of ſhutting and opening his mouth, which is done in a private conſiſtory. The ſhutting his mouth, implies the depriving him of the liberty of giving his opinion in congregations; and the opening his mouth, which is performed fifteen days after, ſignifies the taking off this reſtraint. However, if the pope happens to die during the time a cardinal's mouth is ſhut, he can neither give his voice in the election of a new pope, nor be himſelf advanced to that dignity.

The cardinals are divided into ſix claſſes or orders, conſiſting of ſix biſhops, fifty prieſts, and fourteen deacons, making in all ſeventy; which conſtitute the ſacred college. The number of cardinal-biſhops has very ſeldom been changed, but that of prieſts and deacons, have varied at different times.

The privileges of the cardinals are very great: they have an abſolute power in the church during the vacancy of the holy ſee: they have a right to elect the new pope, and are the only perſons on whom the choice can fall: moſt of the grand offices in the court of Rome, are filled by cardinals. The dreſs of a cardinal is a red ſoutanne, a rochet, a ſhort purple mantle, and the red hat. When they are ſent to the courts of princes, it is in quality of legates *a latere*; and when they are appointed governors of towns, their government is called by the name of legation.

CARDINAL is alſo a title given to ſome biſhops, as thoſe of Mentz and Milan, to the archbiſhop of Bourges; and the abbot of Vendome calls himſelf cardinalis natus.

CARDINAL is likewiſe a title applied to ſecular officers. Thus the prime miniſters in the court of the emperor Theodoſius, were called cardinales.

CARDING, the combing and preparing of wool, cotton, flax, &c. with the inſtruments called cards. See CARD.

Before wool be carded, it muſt be greaſed with oil, of which one fourth part of the weight of the wool is required for that which is deſigned for making the woof of ſtuffs, and the eight part for that of the warp.

CARDIOID, in the higher geometry, an algebraical curve, ſo called from its reſemblance to a heart; for the deſcription and properties of which, ſee the Philoſophical Tranſactions, N° 461.

CARDIOSPERMUM, in botany, a genus of the octandria-trigynia claſs of plants, the flower of which conſiſts of four petals, and is cruciform; the fruit is a roundiſh trilocular capſule, containing a ſingle cordated ſeed.

CARDO, in anatomy, a name given to the ſecond vertebra of the neck. See the article AXIS.

CARDONNA, a city of Catalonia, in Spain, ſituated on a river of the ſame name, about forty miles north-weſt of Barcelona; eaſt longitude 1° 20′, north latitude 41° 35′.

CARDUEL, a province of Georgia, in Aſia, lying between the Caſpian and Euxine ſeas, the capital whereof is Teflis. It belongs partly to the Turks, and partly to the Perſians.

CARDUUS, the THISTLE, in botany, a genus of the ſyngeneſia-polygamia-æqualis claſs of plants, the compound flower of which is tubulous and uniform, the proper flower is monopetalous, of a funnel form, with a very ſmall tube and erect limb, and divided into five linear equal ſegments. There is no pericarpium, but the cup is a little connivent, and contains ſolitary, vertically-ovated, quadrangular ſeeds, with two oppoſite angles obliterated, and crowned with a very long down. See plate XXXVII. fig. 1.

CARDUUS BENEDICTUS, in the materia medica, a ſpecies of the carduus, which has been celebrated by the writers of the earlier ages as alexiterial, ſudorific and cordial. At preſent, however, the greateſt uſe made of it, is by way of infuſion, for working off an emetic. The ſeeds have been recommended in emulſions, for promoting the eruptions of the puſtules in the ſmall-pox; and the ſimple water in the ſhops, being found to have little or nothing of the virtues of the plant, has been of late wholly diſuſed.

CARDUUS FULLONUM, a name by which the

the dipſacus, or teazel, is ſometimes called. See the article DIPSACUS.

CAREENING, in the ſea-language, the bringing a ſhip to lie down on one ſide, in order to trim and caulk the other ſide. A ſhip is ſaid to be brought to the careen, when the moſt of her lading being taken out, ſhe is hauled down on one ſide by a ſmall veſſel as low as neceſſary; and there kept by the weight of the ballaſt, ordnance, &c. as well as by ropes, leſt her maſts ſhould be ſtrained too much; in order that her ſides and bottom may be trimmed, ſeams caulked, or any thing that is faulty under water, mended. Hence when a ſhip lies on one ſide when ſhe ſails, ſhe is ſaid to ſail on the careen.

CAREER, in the manege, ſignifies the ground that is proper for the manege, and the courſe or race of a horſe that does not go beyond two hundred paces.

In the antient circus, the career was the ſpace the chariots were to run at full ſpeed to carry the prize. See the article CIRCUS.

CARELIA, in geography, a province of Finland, bounded by the province of Savolaxia on the north, and by the gulph of Finland on the ſouth. It is ſubject to Ruſſia.

CARELSCROON, a port-town of the province of Gothland, in Sweden, ſituated on the coaſt of the Baltic; eaſt long. 15°, and north latitude 56° 20′.

It is an excellent harbour, where the Swedes lay up their royal navy.

CARENTAN, a town of Normandy, in France, ſituated at the mouth of a river of the ſame name; weſt longitude 1° 15′, and north latitude 49° 20′.

CARESEN, or CASSEEN, a ſea-port town of Arabia Felix, ſituated on the Indian ocean; eaſt longitude 52°, and north latitude 16°.

CARET, among grammarians, a character marked thus ʌ, ſignifying that ſomething is added on the margin, or interlined, which ought to have come in where the caret ſtands.

CAREX, in botany, a genus of the monoecia-triandria claſs of plants: in the male flower, there is no corolla; in the female, there are no petals; but the nectarium is of an ovato-oblong form, inflated, bidentated at the top: there is no pericarpium; but the nectarium, growing large, contains a ſingle ovato-acute triquetrous ſeed, with one of its angles leſs than the reſt.

CARGADORS, a name which the Dutch give to thoſe brokers, whoſe buſineſs is to find freight for ſhips outward bound, and to give notice to the merchants, who have commodities to ſend by ſea, of the ſhips that are ready to ſail, and of the places for which they are bound.

CARGAPOL, or KARGAPOL, the capital of a territory of the ſame name, in the province of Dwina, in Muſcovy; eaſt longitude 36°, and north latitude 63°.

CARGO denotes all the merchandizes and effects which are laden on board a ſhip, excluſive of the crew, rigging, ammunition, proviſions, guns, &c. though all theſe load it ſometimes more than the merchandizes.

We ſay that a ſhip has its cargo, when it is as full of merchandize as it can hold; that it has half its cargo, when it is but half full; that it brings home a rich cargo, when it is laden with precious merchandize, and in great quantity; that a merchant has made the whole cargo of the ſhip, or only one half, or one quarter of the cargo, when he has laden the whole ſhip at his own expence, or only one half, or one fourth of it.

Diſpoſing of any part of the cargo, before the veſſel reaches her intended port, is called breaking bulk. See the article BREAKING BULK.

Super-CARGO, a perſon employed by merchants to go a voyage, and overſee the cargo, and diſpoſe of it to the beſt advantage.

CARIATI, a town of the hither Calabria, in Italy, ſituated on the gulph of Tarento; eaſt longitude 17° 20′, and north latitude 39° 20′.

It is a biſhop's ſee.

CARIBBE-ISLANDS, a cluſter of iſlands, ſituated in the Atlantic ocean, between 59° and 63° weſt longit. and between 11° and 18° north lat.

CARIBBIANA, or CARIBIANA, the north-eaſt coaſt of Terra-firma, in ſouth America, otherwiſe called New-Andaluſia. See the article ANDALUSIA.

CARICA, the PAPAW-TREE, in botany, a genus of the dioecia-decandria claſs of plants, the male flower of which is monopetalous, of a funnel-form, with a limb divided into five lanceolato-linear, obtuſe, obliquely ſpiral ſegments: the female flower is pentapetalous, the petals being lanceolato-linear, obtuſe on both ſides, very long, erect below the middle, but above the middle bending outwards and downwards: the fruit is a very large berry, angulated with five furrows, having

ing one cell, and containing numerous, ovated, ſulcated, and tunicated ſeeds.

CARICA is alſo a name uſed by medical writers for the fruit of the fig-tree. See the articles FIG and FICUS.

CARICATURA, in painting, denotes the concealment of real beauties, and the exaggeration of blemiſhes, but ſtill ſo as to preſerve a reſemblance of the object.

CARICOUS, an epithet given to ſuch tumours as reſemble the figure of a fig. They are frequently found in the piles.

CARIES, in ſurgery, the corruption of a bone, when it is deprived of its perioſteum, and having loſt its natural heat and colour, becomes fatty, yellow, brown, and at laſt black.

A caries may be diſtinguiſhed into two ſorts, the firſt, where the diſorder begins in the internal part of the bone. See the article SPINA VENTOSA.

The other, when it begins on the outſide, or from an external cauſe.

We find two cauſes of the caries of a bone, one ariſing from a wound, or any other accident, when the bone is expoſed to the injuries of the external air, or is corrupted by unſkilfulneſs in dreſſing; the other, when the fluids are interrupted in their circulation, by any external violence, or internal cauſe whatſoever, from whence inflammation and ſuppuration ſucceed; by which the perioſteum and bone loſing their nouriſhment, on account of the veſſels being inflamed and corrupted, quickly becomes carious; or from venereal cauſes. Hence it appears that there are ſeveral degrees of a caries of the bone, but the worſt kind is that which falls upon the joints, or any parts of the bone that lie deep, becauſe as there is no acceſs to clean it, the caſe admits of no remedy but amputation of the limb. With regard to the cure of a caries, the mildeſt method is applied to the ſlighteſt degree, and is performed by the application of ſpirituous remedies, or by balſamics. In a caries that penetrates ſomewhat deeper, ſtronger remedies take place, ſuch as the pulvis euphorbii cum ſpiritu vini optimo parato, aqua phagedænica, or a ſolution of mercury in aqua fortis, or ſpirit of nitre; and when by theſe you have procured an exfoliation of the diſeaſed part, the cure is to be completed with balſamics.

A ſecond method conſiſts in perforating the bone, after it is laid bare with an inſtrument; after which it is to be dreſſed with dry lint, or balſamic medicines. A third method is performed by ſcraping away the vitiated part of the bone with a raſpatory, or chiſſel, till all the corrupted parts being deſtroyed, the bone appears white or ruddy, and ſound. See the article TREPANNING.

The fourth, which is the moſt ancient and moſt certain method of cure, eſpecially in the greater degrees of this diſorder, is performed by burning down the vitiated part of the bone with the actual cautery; and in this operation great care muſt be taken not to injure the fleſh, or other ſoft parts that lie near it. In fine, the principal buſineſs in curing a caries of the bone conſiſts in a ſpeedy extirpation of the carious parts of the bone, and the reſt of the cure is performed in the ſame manner as other ulcers are treated.

CARIGNAN, a fortified town of Piedmont, ſituated on the river Po, about ſeven miles ſouth of Turin; eaſt longit. 7° 25′, and north lat. 44° 36′.

CARIGUEIA, or CARIGOI, in zoology, a ſpecies of opoſſum. See plate XXXVII. fig. 2. and the article OPOSSUM.

CARINA properly denotes the keel of a ſhip. See the article KEEL.

CARINA, in architecture, a name given by the Romans to all buildings in the form of a ſhip (from *carina*, the keel of a ſhip), as we ſtill uſe the word nave for *navis*, a ſhip, the middle or principal vault of our churches, becauſe it has that figure.

CARINA, in anatomy, a term uſed for the fibrous rudiments, or embryo of a chick, appearing in an incubated egg.

The carina conſiſts of the intire vertebræ, as they appear after ten or twelve days incubation.

CARINA, in botany, the loweſt petal of a papilionaceous flower. See the article PAPILIONACEOUS.

CARINTHIA, a dutchy in the circle of Auſtria, in Germany, bounded by the archbiſhopric of Saltzburg on the north, and by Carniola and the dominions of Venice on the ſouth.

It is ſubject to the houſe of Auſtria.

CARIONOLA, a city of the province of Lavoro, in the kingdom of Naples, about twenty miles north of the city of Naples: eaſt long. 15°, and north lat. 41° 29′.

It is a biſhop's ſee.

CARIPI, a kind of cavalry in the turkiſh army.

The caripi, to the number of about one thouſand, are not ſlaves, nor bred up in the ſeraglio, like the reſt, but are generally moors, or renegado chriſtians, who, having followed adventures, and being poor,

poor, and having their fortune to ſeek by their dexterity and courage, have arrived to the rank of horſe-guards to the grand ſignior.

CARISBROOK-CASTLE, a caſtle ſituated in the middle of the iſle of Wight, where king Charles I. was impriſoned: weſt long. 1° 30′, and north lat. 50° 50′.

CARLINA, the CARLINE-THISTLE, in botany, a genus of the ſyngeneſia-polygamia-æqualis claſs of plants: the compound flower is uniform and tubuloſe; the partial flower conſiſts of a ſingle funnel-faſhioned petal, with a ſmall tube; the limb is campanulated, and divided into five ſegments: it has no pericarpium: the ſeeds are ſingle, roundiſh, and hairy. See plate XXXVII. fig. 3.

CARLINE, or CAROLINE, a ſilver coin current in the neapolitan dominions, and worth about four pence of our money.

CARLINE THISTLE, *carlina*. See the article CARLINA.

CARLINES, or CARLINGS, in a ſhip, two pieces of timber, lying fore and aft, along from beam to beam, whereon the ledges reſt on which the planks of the ſhip are faſtened. All the carlings have their ends let into the beams culvertail-wiſe: they are directly over the keel, and ſerve as a foundation for the whole body of the ſhip.

CARLISLE, a city in Cumberland, ſituated near the mouth of the river Eden, and the Solway frith: weſt longitude 2° 30′, and north latitude 54° 45′.

It is a biſhop's ſee.

CARLOCK, in commerce, a ſort of iſinglaſs made with the ſturgeon's bladder, imported from Archangel. The chief uſe of it is for clarifying wine; but it is alſo uſed by dyers. The beſt carlock comes from Aſtracan, where a great quantity of ſturgeon is caught.

CARLOWITZ, a town of Sclavonia, ſituated on the weſt ſide of the Danube, about thirty-five miles north-weſt of Belgrade; eaſt long. 20° 45′, and north lat. 45° 15′.

CARLETADT, the capital of Croatia, a frontier province of chriſtendom againſt the Turks: eaſt longitude 16°, and north latitude 45° 15′.

It is ſubject to the houſe of Auſtria.

CARLSTADT is alſo the name of a town in the biſhopric of Wurtſburg, in the circle of Franconia, in Germany, ſituated on the river Maine, about fourteen miles north of Wurtſburg: eaſt longitude 9° 50′, and north latitude 50°.

CARMAGNIOL, a fortified town of Piedmont, ſituated on the river Po, about ten miles ſouth of Turin; eaſt longitude 7° 30′, and north latitude 44° 45′.

CARMELITES, or WHITE-FRIERS, are an order of our lady of mount Carmel, making one of the four orders of mendicants. They pretend to derive their original from the prophets Elijah and Eliſha. Their original rules contained ſixteen articles, one of which confined them to their cells, and enjoined them to employ themſelves day and night in prayer; another prohibited the brethren having any property; another enjoined faſting, from the feaſt of the exaltation of the holy croſs till eaſter, excepting on Sundays; abſtinence at all times from fleſh, was enjoined by another article; one obliged them to manual labour; another impoſed a ſtrict ſilence on them, from veſpers till the tierce the next day: however, theſe conſtitutions have been in ſome reſpects altered.

This order is ſo much increaſed, that it has at preſent thirty-eight provinces, beſides the congregation of Mantua (in which there are fifty-four monaſteries, under a vicar-general) and the congregation of bare-footed carmelites in Italy and Spain, which have their peculiar generals.

The barefooted carmelites are a reform of the antient carmelites, ſet on foot in 1540, by S. Thereſa, and ſo called from their going barefooted.

If a monk of this order lie with a woman, he is prohibited ſaying maſs for three or four years, is declared infamous, and obliged to diſciplin himſelf publicly once a week: if he is again guilty of the ſame offence, his penance is doubled: and if a third time, he is expelled the order.

Knights of the order of our lady of mount CARMEL, a military order inſtituted by Henry IV. ſirnamed the Great, of France, in honour of the bleſſed Virgin, and incorporated into the order of knights of St. Lazarus of Jeruſalem.

CARMEN, a latin term, uſed, in a general ſenſe, to ſignify a verſe; but in a more peculiar ſenſe, to ſignify a ſpell, charm, form of expiation, execration, &c. couched in few words, placed in a myſtic order, on which its efficacy was ſuppoſed to depend.

CARMENTALIA, feaſts celebrated by the Romans, in honour of the propheteſs Carmenta, the mother of Evander.

They were ſolemnized twice in the month of January, *viz.* on the 11th and 15th.

These feasts were established on account of a great fecundity among the Roman dames, after a general reconciliation with their husbands, with whom they had been at variance, in regard to the use of coaches being prohibited them by an edict of the senate. It was the women who celebrated these feasts.

CARMINATIVES, in pharmacy, medicines used in colics, or other flatulent disorders, to disper the wind.

A great many seem to be strangers to this term, as it does not appear to carry in it any thing expressive of the medicinal efficacy of those simples which pass under its denomination. This term had certainly its rise, when medicine was too much in the hands of those jugglers, who, for want of true knowledge in their profession, brought religion into their party; and what through their ignorance they were not able to do by rational prescription, they pretended to effect by invocation and their interest with heaven. Which cant being generally, for the surprize sake, couched in some short verses, the word *carmen*, which signifies a verse, was used also to mean an inchantment: which was frequently made use of to satisfy the people of the operation of a medicine they could not account for. And as those medicines now under this name are of quick efficacy; and the consequences thereof, in many instances, surprizng; and the most violent pains, sometimes arising from pent up wind, immediately ceasing upon its dispersion; such medicines as give relief, in this case, are more properly termed carminatives, as if they cured by inchantment.

How they expel wind may be conceived, when we consider that all the parts of the body are perspirable. Sanctorius, in his Medicina Statica, determines all we call wind in the bowels to be such perspirable matter as makes its escape thro' the coats of the stomach and intestines. Between the several membranes likewise of the muscular parts may such matter break out, and lodge for some time. Now whatsoever will rarefy and render such collections of vapours thinner, must conduce to their utter discharge out of the body; and consequently remove those uneasinesses, which arise from their detention. And as all those things that pass under this denomination are warm, and consist of very light subtile parts, it is easy to conceive how a mixture of such particles may agitate and rarefy those flatulencies, so as to facilitate their expulsion; especially considering those grateful sensations which such medicines give to the fibres; which cannot but invigorate their tonic undulations so much, that by degrees the obstructed wind is dislodged, and at last quite expelled. But if the obstruction be not great, the rarefaction of the wind upon taking such a medicine is often so sudden, and likewise its discharge, that it goes off like the explosion of gunpowder.

All the things under this class, being warm and discussive, are much used in the composition of cathartics, of the rougher sort especially. For the irritation occasioned by those would be scarce tolerable without the mitigation of such grateful ingredients. Many likewise of this sortment are in the composition of discussive topics.

The four carminative flowers are those of camomile, melilot, motherwort, and dill; besides, angelica, fennel, lovage, anise, caraway, coriander, cummin, *&c.* all agree in their carminative qualities, and are therefore used in compositions of that intention.

CARMINE, a powder of a very beautiful red colour, bordering upon purple, and used by painters in miniature; though but rarely, because of its great price.

It is extracted from cochineal, by means of water, wherein chouan and antour have been infused; some add rocou, but this gives it too much of the oval cast. Others make carmine with brasil-wood, fernambouc, and leaf-gold, beat in a mortar, and steeped in white-wine vinegar; the scum arising from this mixture, upon boiling, when dried, makes carmine; but this kind is vastly inferior to the former: there is another carmine, made of brasil-wood and fernambouc, by a different preparation.

CARMONA, a town of Andalusia, in Spain, about seventeen miles east of Sevil; west longitude 5° 35′, and north latitude 37° 20′.

CARNARVON, a borough-town of Carnarvonshire, in north Wales, about five miles south-west of Bangor: west long. 4° 25′, and north latitude 53° 20′.

It gives the title of earl to the noble family of Bridges; and sends one member to parliament.

CARNATION, in botany, a name given to several species of dianthus or pink, on account of their beautiful flesh-colour.

CARNATION-COLOUR, among painters, is

underſtood of all the parts of a picture, in general, which repreſent fleſh, or which are naked and without drapery.

In colouring for fleſh, there is ſo great a variety, that it is hard to lay down any general rules for inſtruction therein; neither are there any regarded by thoſe who have acquired a ſkill this way: the various colouring for carnations, may be eaſily produced, by taking more or leſs red, blue, yellow, or biſtre, whether for the firſt colouring, or for the finiſhing: the colour for women ſhould be bluiſh, for children a little red, both freſh and gay; and for the men it ſhould incline to yellow, eſpecially if they are old.

CARNATION, among dyers. To dye a carnation, or red roſe-colour: take liquor of wheat-bran, a ſufficient quantity; alum, three pounds; tartar, two ounces; boil them, and enter twenty yards of broad cloth; boil three hours; cool, and waſh it: take freſh, clear bran-liquor, a ſufficient quantity; madder, five pounds: boil and ſadden according to art.

The Bow-dyers know that the ſolution of jupiter, or delved tin, being put in a kettle to the alum and tartar (in another proceſs) make the cloth, &c. attract the colour into it, ſo that none of the cochineal is left, but all drawn out of the water into the cloth.

CARNEIA, Καρνεια, in antiquity, a feſtival in honour of Apollo, ſurnamed Carneus, held in moſt cities of Greece, but eſpecially at Sparta, where it was firſt inſtituted. The reaſon of the name, as well as the occaſion of the inſtitution, is controverted. It laſted nine days, beginning on the 13th of the month Carneus. The ceremonies were an imitation of the method of living, and diſcipline uſed in camps. Nine σκιαδες, or tents, were erected, in each of which nine men of three different tribes lived the ſpace of nine days, during which time they were obedient to a public crier, and did nothing without expreſs order from him. The chief prieſt who attended this ſolemnity was named Agetes; beſides whom, there were five miniſters called *carneatæ*, who were obliged to hold their office four years, and to remain batchelors during that time.

CARNEL, among ſhip-carpenters. The building of ſhips, firſt with their timbers and beams, and after bringing on their planks, is called carnel-work, to diſtinguiſh it from clinch-work.

CARNELIAN, *ſarda*, in natural hiſtory, a precious ſtone, of which there are three kinds, diſtinguiſhed by three colours, a red, a yellow, and a white. Authors have attributed medicinal virtues to the red carnelian; this, therefore, is to be underſtood the *ſarda*, or carnelian of the ſhops. It is very well known among us, is found in roundiſh or oval maſſes, much like our common pebbles; and is generally met with between an inch and two or three inches in diameter: it is of a fine, compact, and cloſe texture, of a gloſſy ſurface; and, in the ſeveral ſpecimens, is of all the degrees of red, from the paleſt fleſh-colour to the deepeſt blood-red. It is generally free from ſpots, clouds, or variegations; but ſometimes it is veined very beautifully with an extremely pale red, or with white; the veins forming concentric circles, or other leſs regular figures, about a nucleus, in the manner of thoſe of agates. The pieces of carnelian which are all of one colour, and perfectly free from veins, are thoſe which our jewellers generally make uſe of for ſeals, though the variegated ones are much more beautiful. The carnelian is tolerably hard, and capable of a very good poliſh: it is not at all affected by acid menſtruums: the fire diveſts it of a part of its colour, and leaves it of a pale red; and a ſtrong and long continued heat will reduce it to a pale dirty grey.

The fineſt carnelians are thoſe of the Eaſt-Indies; but there are very beautiful ones found in the rivers of Sileſia and Bohemia; and we have ſome not deſpicable ones in England.

Though the antients have recommended the carnelian as an aſtringent, and attributed a number of fanciful virtues to it, we know no other uſe of the ſtone, than the cutting ſeals on it, to which purpoſe it is excellently adapted, as being not too hard for cutting, and yet hard enough not to be liable to accidents, to take a good poliſh, and to ſeparate eaſily from the wax.

CARNIOLA, a territory of Auſtria, in Germany, bounded by Carinthia and Stiria on the north, and by the dominions of Venice on the ſouth.

CARNIVAL, or CARNAVAL, a time of rejoicing, a ſeaſon of mirth, obſerved with great ſolemnity by the Italians, particularly at Venice, holding from twelfthday till lent.

Feaſts, balls, operas, concerts of muſic, intrigues, marriages, &c. are chiefly held in

in carnival-time. The carnival begins at Venice the ſecond holiday in chriſtmas: then it is they begin to wear maſks, and open their play-houſes and gaming-houſes; the Place of St. Mark is filled with mountebanks, jack-puddings, pedlars, whores, and ſuch like mob, who flock thither from all parts: there have been no leſs than ſeven foreign princes, and thirty thouſand foreigners here, to partake of theſe diverſions.

CARNIVOROUS, an appellation given to animals which naturally feed on fleſh, and thence called beaſts or birds of prey. Some will have it, that no quadrupeds are naturally carnivorous but thoſe furniſhed with canine or dog-teeth: on which principle mankind are excluded out of the number of naturally carnivorous animals; and, in fact, animal food muſt undergo various preparations before it is fit for the uſe of man.

To the arguments uſed by Dr. Wallis and others, to prove that man is not naturally carnivorous, Dr. Tyſon anſwers, that if man had been deſigned by nature not to be carnivorous, there would doubtleſs have been found ſomewhere in the globe, people who do not feed on fleſh; and as hiſtory ſeems not to furniſh any inſtance hereof, may not we ſay, that what is done univerſally by the whole ſpecies, is natural? For what the Pythagoreans did in abſtaining from fleſh, was on the principle of a tranſmigration, a miſtake in their philoſophy, not a law of nature: and though in ſome countries, men feed more ſparingly on fleſh than in others, this is owing to their own choice, from the advantage they perceive by it. That carnivorous animals are not always without a colon and cæcum; nor are all animals carnivorous which have thoſe parts; but that the carigueya, or opoſſum, for inſtance, has both a colon and a cæcum, yet feeds on poultry, and other fleſh; whereas the hedge-hog has neither colon nor cæcum, and therefore ought to be carnivorous, yet it feeds only on vegetables; add, that hogs, which have both, will feed on fleſh greedily enough when they can get it; and that rats and mice, which have large cæcums, feed on bacon, as well as bread and cheeſe. That from the multitude of carnivorous animals which want thoſe parts, and of non-carnivorous which have one or both, no ſafe concluſion can be drawn; ſince we might as well argue, that becauſe the neat-kind, ſtag-kind, goat-kind, and ſheep-kind, which live on herbage, have four ſtomachs, therefore all thoſe which have not four ſtomachs were not deſigned by nature to be graminivorous; whereas the horſe-kind and hare-kind have but one ſtomach, yet feed on graſs like the former: add, that in many animals which live on the ſame ſort of food, the ſtructure of the ſtomach is found very different; and that in others which live on different foods, *ex. gr.* on fleſh, on fruits, on graſs, *&c.* the ſtomachs are found ſo like, that it is difficult to aſſign any difference between them; and if we cannot make a judgment what food is moſt natural to an animal from the ſtructure of its ſtomach, which is the part moſt concerned in digeſting it, much leſs can we judge from the colon or cæcum, which are parts remote from the ſtomach, and rather ſeem as a cloaca for the reception of the fæces, than of uſe for digeſting or diſtributing the food. In fine, ſince man has all manner of teeth, fit for the preparation of all ſorts of foods, ſhould it not rather ſeem that nature intended we ſhould live on all? And as the alimentary duct in the human-kind is fitted for digeſting all ſorts of food, may we not rather conclude that nature did not intend to deny us any?

CARNIUS, in chronology, the ſyracuſian name for the athenian month metagitnion; which was the ſecond of their year, and anſwered to the latter part of our July, and begining of Auguſt.

CARNOSE, or CARNOUS, in a general ſenſe, ſomething belonging to or abounding with fleſh. Hence,

CARNOSE LEAF is one full of pulp, contained between the inveſtient membranes.

CARNOSE MUSCLE. See PYRAMYDALIS.

CARNOSE PANNICLE. See the article PANNICULUS CARNOSUS.

CARNOSITY, a term ſometimes uſed for an excreſcence, or tubercle, in the urethra, the neck of the bladder, or yard, which ſtops the paſſage of the urine. Carnoſities are very difficult of cure: they are not eaſily known, but by introducing a probe into the paſſage, which there meets with reſiſtance. They uſually ariſe from ſome venereal malady ill managed.

CARO, FLESH, in anatomy. See the article FLESH.

CARO MUSCULOSA QUADRATA, in anatomy, the ſame with the *pulmaris brevis*. See the article PULMARIS.

CAROB-

CAROB-TREE, the engliſh name of the ſiliqua, or ceratonia, of botaniſts. See the article CERATONIA.

CAROLINA, a province of North America, belonging to Great Britain: it is ſituated, comprehending Georgia, between 75° and 86° weſt longit. and between 31° and 36° north latitude; and bounded by Virginia on the north, by the Atlantic ocean on the eaſt, by ſpaniſh Florida on the ſouth, and by the apalachian mountains on the weſt; or rather extends weſtward, without any limits. It is divided into three diſtinct governments, *viz.* North and South Carolina, and Georgia.

CAROLINE-BOOKS, the name of four books, compoſed by order of Charlemagne, to refute the ſecond council of Nice.

Theſe books are couched in very harſh and ſevere terms, containing one hundred and twenty heads of accuſation againſt the council of Nice, and condemning the worſhip of images.

CAROLSTAT, a town of Gothland, in Sweden, ſituated at the north end of the Wener-lake, about one hundred and forty miles weſt of Stockholm: eaſt longitude 13° 30′, and north latitude 59° 40′.

CAROLUS, an antient engliſh broad piece of gold, ſtruck under Charles I. its value has of late been at twenty-three ſhillings ſterling, though at the time it was coined, it is ſaid to have been rated at only twenty ſhillings.

CAROLUS, a ſmall copper coin, with a little ſilver mixed with it, ſtruck under Charles VIII. of France.

The carolus was worth twelve deniers, when it ceaſed to be current.

Thoſe which are ſtill current in trade, in Lorrain, or in ſome neighbouring provinces, go under the name of french ſols.

CAROTEEL, in commerce, an uncertain weight or quantity of goods: thus a caroteel of cloves is from four to five hundred weight; of currans, from five to nine; of mace, about three hundred; of nutmegs, from ſix to ſeven hundred and a half.

CAROTIDS, in anatomy, two arteries of the neck, which convey the blood from the aorta to the brain, one called the right carotid, and the other the left: they ariſe near each other, from the curvature of the aorta, and run upon each ſide of the arteria trachea, between it and the internal jugular vein, as big as the larynx, without any ramification; each of theſe is then ramified into two branches, one named internal, the other external. The internal carotid-artery having paſſed the great canal of the apophyſis petroſa of the os temporis, ſends off a branch thro' the ſphenoidical fiſſure to the orbit of the eye, and ſoon afterwards another thro' the foramen opticum, by which it communicates with the external carotid. The external is the ſmalleſt; it runs between the external angle of the lower jaw, and the parotid gland; afterwards it aſcends on the fore ſide of the ear, and ends in the temples. All the ramifications of the carotids are covered by the pia mater, in the duplicature of which they are diſtributed, and form capillary, reticular textures in great numbers; afterwards they are loſt in the inner ſubſtance of the brain. See the article ARTERY.

CARP, in ichthyology, the engliſh name of the cyprinus, with four cirri, or beards, and the third ray of the back-fins armed with ſmall hooks.

The carp is generally taken for the queen of freſh-water fiſh; it is ſubtle, and lives the longeſt of all fiſh, except the eel, out of its proper element. It is obſerved to breed ſeveral months in one year; for which reaſon you hardly ever take either male or female without melt or ſpawn; but they breed more naturally in ponds, than in running water, and in the latter very ſeldom or never. In the places they frequent, their ſtock is innumerable. To make a carp fat and very large, rake all the ſides of your pond, when the water is fallen away, about April, then ſow hay ſeeds, the growth of which, when the winter comes, and overflows it, will feed them, and make them very fat.

CARPA, and CARPANUS, the ſame with carp. See the preceding article.

CARPATHIAN MOUNTAINS, thoſe dividing Hungary and Tranſilvania from Poland.

CARPENTER, an artificer in wood, deſigned for the purpoſes of building. See the article CARPENTRY.

Ship-CARPENTER, one employed in building or repairing ſhips. See the article *Conſtruction of* SHIPS.

CARPENTRAS, a city of Provence, in France, about ſeventeen miles north-eaſt of Avignon: weſt longitude 5°, and north latitude 44° 10′.

It is ſubject to the pope.

CARPENTRY, the art of cutting, framing, and joining large pieces of wood, for the uſes of building. It is one of the

arts

arts ſubſervient to architecture, and is divided into houſe-carpentry and ſhip-carpentry: the firſt is employed in raiſing, roofing, flooring of houſes, &c. and the ſecond in the building of ſhips, barges, &c. the rules in carpentry are much the ſame with thoſe of joinery; the only difference is, that carpentry is uſed in the larger coarſer work, and joinery in the ſmaller and curious. See JOINERY.

CARPESIUM, in botany, a genus of the ſyngeneſia polygamia ſuperflua claſs of plants, the common calyx of which is an imbricated perianthium; the compound flower is equal; the ſtamina of the hermaphrodite flower are five, ſhort filaments; the antheræ form a cylinder; there is no pericarpium, but the ſeed, which is oblong and compreſſed, is lodged in the cup.

CARPET, a ſort of covering of ſtuff, or other materials, wrought with the needle or on a loom, which is part of the furniture of a houſe, and commonly ſpread over tables, or laid upon the floor.

Perſian and Turkey carpets are thoſe moſt eſteemed; tho' at Paris there is a manufactory after the manner of Perſia, where they make them little inferior, not to ſay finer, than the true Perſian carpets. They are velvety, and perfectly imitate the carpets which come from the Levant. There are alſo carpets of Germany, ſome of which are made of woolen ſtuffs, as ſerges, &c. and called ſquare carpets: others are made of wool alſo, but wrought with the needle, and pretty often embelliſhed with ſilk; and laſtly, there are carpets made of dog's hair. We have likewiſe carpets made in England, which are uſed either as floor-carpets, or to make chairs and other houſhold-furniture: it is true we are not arrived at the like perfection in this manufacture with our neighbours the French; but may not this be owing to the want of the like public encouragement?

CARPI, a town of the Veroneſe, in Italy, ſituated on the river Adige, twenty-four miles ſouth-eaſt of Verona: eaſt longitude 11° 40', and north latitude 45° 10'.

CARPI is alſo the name of a city of the dutchy of Modena: eaſt longitude 11° 10', and north latitude 40° 40'.

CARPINUS, the HORN-BEAM, in botany, a genus of plants belonging to the monoecia-polyandria claſs; in the male flower there is no corolla, nor in the female; but the male flowers are arranged into a cylindric amentum, and the female into an oblong one; there is no pericarpium, but the amentum, growing very large, contains at the baſe of each ſquamula, an oval, angulated nut.

CARPOBALSAM, in the materia medica, the fruit of the tree which yields the true oriental balſam.

The carpobalſam is uſed in Egypt, according to Proſper Alpinus, in all the intentions for which the balſam itſelf is applied: but the only uſe the Europeans make of it is in venice-treacle and mithridate, and in theſe not a great deal; for cubebs and juniper-berries are generally ſubſtituted in its place.

CARPOCRATIANS, heretics, who ſprung up towards the middle of the IId. century, being a branch of the antient gnoſtics. They held a community of wives; and maintained, that a man cannot arrive at perfection, without having paſſed through all criminal actions; laying down as a maxim, that there is no action bad in itſelf, but only from the opinion of men. Accordingly they are charged with committing the moſt infamous actions at their love feaſts. They attributed the creation of the world to angels; they ſaid, that Jeſus was born in a manner like other men; they rejected the reſurrection of the body; and they marked their diſciples at the bottom of the right ear with a hot iron, or with a razor.

CARPUS, the WRIST, in anatomy. See the article WRIST.

CARR, among the antients, a kind of throne mounted on wheels, and uſed in triumphs and other ſolemn occaſions.

The carr on medals, drawn by horſes, lions, or elephants, ſignifies a triumph, or an apotheoſis; ſometimes a proceſſion of the images of the gods at a ſolemn ſupplication; and ſometimes of thoſe of ſome illuſtrious families at a funeral. The carr, covered and drawn by mules, only ſignifies a conſecration, and the honour done any one of having his image carried at the games of the circus.

CARRAC, the name of the veſſels employed by the Portugueſe in the eaſt-india and braſilian trade; they are very large, and fitted for fighting as well as for burden.

CARRAT, or CARACT. See the article CARACT.

CARRIAGE, a vehicle ſerving to convey perſons, goods, merchandizes, and other things from one place to another.

There are public and private carriages, as alſo water and land-carriages. Wa-

ter-

ter-carriages, in general, are thoſe veſſels which ſerve to carry perſons or merchandize by ſea, rivers, lakes, &c. as ſhips, barks, wherries, boats, &c. Land-carriages are machines invented to carry more conveniently, and in greater number, perſons or goods. Thoſe moſtly uſed in Europe, are coaches, chariots, calaſhes, berlins, waggons, with four wheels, chaiſes, carts, and drays with two wheels, all drawn by horſes, mules, buffaloes, oxen, &c. and in Lapland and Siberia by rein-deer. See the articles COACH, CHARIOT, &c.

All theſe animals are alſo proper to carry burdens on their backs, in which manner the camels and dromedaries are employed in the caravans of Aſia and the caffias of Africa. See the articles CARAVAN and CAFFILA.

In ſome parts of America, the vigoonas, lamas, and alpagnas are uſed as carriage-beaſts. Laſtly, the ſedan-chair, carried by two men, and the palanquin carried on the ſhoulders of two, four, or ſix men, are alſo carriages, but ſerve for perſons only. The former is uſed in many cities of Europe, and the latter in the Eaſt-Indies.

Letter or bill of CARRIAGE, a writing given to a carrier or the maſter of any carriage, containing the number and quality of the pieces, bales, &c. of merchandizes, which he is intruſted with, that he may demand the payment of the carriage, and that the perſon, to whom they are addreſſed, may ſee whether they are delivered in the ſame number, and in as good condition as they were given to the carrier.

CARRIAGE *of a cannon*, the frame or timber-work on which it is mounted, ſerving to point it for ſhooting, or to carry it from one place to another. It is made of two planks of wood, commonly one half the length of the gun, called the cheeks, and joined by three wooden tranſums, ſtrengthened with three bolts of iron. It is mounted on two wheels; but on a march has too fore-wheels, with limbers added. The principal parts of a carriage are the cheeks, tranſums, bolts, plates, train, bands, bridge, bed, hooks, trunion-holes, and capſquare.

Block-CARRIAGE, a cart made on purpoſe for carrying mortars and their beds from place to place.

Truck-CARRIAGE, two ſhort planks of wood ſupported on two axel-trees, having four trucks of ſolid wood for carrying mortars or guns upon battery, where their own carriages cannot go. They are drawn by men.

CARRIAGE, in agriculture, a furrow for the conveyance of water to overflow and improve the ground. It is diſtinguiſhed into two ſorts; the main carriage, which ſhould be made with a convenient deſcent; and the leſſer carriages, which ſhould be ſhallow, and as many in number as poſſible.

CARRICK, the moſt ſoutherly diviſion of the ſhire of Aire, in Scotland.

CARRICK *on the Sure*, a town of Ireland, in the county of Tipperary, and province of Munſter, about fourteen miles north-weſt of Waterford: weſt longitude 7° 24′, and north latitude 52° 16′.

CARRICK-FERGUS, a town in the county of Antrim, and province of Ulſter, in Ireland, about eighty-five miles north of Dublin: weſt longitude 6° 15′, and north latitude 54° 45′.

CARRIER, a perſon that carries goods for others, for his hire.

If a carrier receives goods to carry to ſuch a place, and he carries them not thither, but to ſome other place, he may be guilty of felony.

CARROT, *daucus*, in botany. See the article DAUCUS.

Carrots are the moſt neceſſary and univerſal roots this country affords: there are two ſorts of carrots, the yellow and the orange; the laſt of which is by much the better: they thrive beſt in a warm, light, or ſandy ſoil. It is uſual to ſow them with beans; ſome of the faireſt of them, being laid up in dry ſand, will keep throughout the winter: theſe may be reſerved till the ſpring, and planted for ſeed.

Deadly CARROT, the engliſh name of the thapſia of authors. See THAPSIA.

CARROUSAL, a courſe of chariots and horſes, or a magnificent entertainment exhibited by princes on ſome public rejoicing. It conſiſts in a cavalcade of ſeveral gentlemen richly dreſſed and equipped, after the manner of antient cavaliers divided into ſquadrons, meeting in ſome public place, and practiſing juſts, tournaments, &c.

The laſt carrouſals were in the reign of Lewis XIV.

CARRYING, a term uſed in the manege. Thus a horſe is ſaid to carry low, that has naturally a ſoft ill ſhaped neck, and lowers his head too much. And a horſe carries well, when his neck is raiſed or arched,

arched, and when he holds his head high without conſtraint, firm and well placed.

CARS, or KARS, a city of Turcomania, or the greater Armenia, ſituated on a river of the ſame name: eaſt longitude 44°, and north latitude 41° 30′.

It is ſubject to the Turks.

CARS, or CARS *of Gowry*, is alſo the name of a diſtrict of Perthſhire, in Scotland, lying eaſtward of Perth, on the northern bank of the Tay.

CART, a land carriage with two wheels, drawn commonly with horſes, to carry heavy goods, *&c.* from one place to another.

The uſe of carts being very common, and convenient for the carriage of all ſorts of commodities, the officers of the police in France, and even the king's council, have not judged it unworthy their care and attention to regulate the functions, and often ſettle the price thereof.

Carts, in London and Weſtminſter, are not to carry more than twelve ſacks of meal, or one chaldron of coals, on pain of forfeiting one of the horſes. The wheels are to be of a certain thickneſs, and without iron; and if any perſon ride in a cart, not having another to guide it, he ſhall forfeit ten ſhillings.

CART-WHEEL. See the article WHEEL.

CARTAMA, a town of Granada, in Spain, about ten miles north-weſt of Malaga: weſt longitude 4° 30′, and north latitude 36° 40′.

CARTEL, an agreement made between two ſtates for the exchange of their priſoners of war.

CARTEL ſignifies alſo a letter of defiance, or a challenge, to decide a controverſy, either in a tournament, or in a ſingle combat. See the article DUEL.

CARTERET, a county of South Carolina, in North America.

CARTESIANS, a ſect of philoſophers, who adhere to the philoſophy advanced by Des Cartes, and founded on the two following principles; the one metaphyſical, the other phyſical: the metaphyſical one is, *I think, therefore I am*; the phyſical principle is, *that nothing exiſts but ſubſtance*. Subſtance he makes of two kinds; the one a ſubſtance that thinks, the other a ſubſtance extended; whence actual thought and actual extenſion are the eſſence of ſubſtance. The firſt of theſe articles is refuted by Mr. Locke, who ſhews, that thinking is not eſſential to the ſoul, or that its eſſence does not conſiſt in thought; the other is confuted from the principles of the Newtonian philoſophy. See the article NEWTONIAN PHILOSOPHY.

The eſſence of matter being thus fixed in extenſion, the carteſians conclude, that there is no vacuum, nor any poſſibility thereof in nature, but that the world is abſolutely full: mere ſpace is precluded by this principle, in regard, extenſion being applied in the idea of ſpace, matter is ſo too.

Upon theſe principles, the carteſians explain mechanically, and according to the laws of motion, how the world was formed, and whence the preſent appearances of nature do riſe. They ſuppoſe, that matter was created of an indefinite extenſion, and divided into little ſquare maſſes, full of angles; that the creator impreſſed two motions on this matter; one whereby each part revolved round its center, another whereby an aſſemblage, or ſyſtem, turned round a common center; whence aroſe as many different vortices as there were different maſſes of matter, thus moving round common centers.

The conſequences of this hypotheſis, according to the carteſians, will be, that the parts of matter in each vortex could not revolve among each other, without having their angles gradually broken, and that this continual friction of parts and angles produced three elements; the firſt, an infinitely fine duſt, formed of the angles broken off; the ſecond, the ſpheres remaining, after all the angular irregularities are thus removed: theſe two make the matter of Des Cartes's firſt and ſecond element; and thoſe particles not yet rendered ſmooth and ſpherical, and which ſtill retain ſome of their angles, make the third element.

Now, according to the laws of motion, the ſubtileſt element muſt take up the center of each ſyſtem, being that which conſtitutes the ſun, the fixed ſtars above, and the fire below; the ſecond element, compoſed of ſpheres, makes the atmoſphere, and all the matter between the earth and the fixed ſtars, in ſuch a manner as that the largeſt ſpheres are always next the circumference of the vortex or ſyſtem, and the ſmalleſt next its center; the third element, or the hooked particles, is the matter that compoſes the earth, all terreſtrial bodies, comets, ſpots in the ſun, *&c.* See the article VORTEX.

Though both philoſophers and divines

have a juſt plea againſt this romantic ſyſtem, yet it muſt be owned, that Des Cartes, by introducing geometry into phyſics, and accounting for the natural phænomena by the laws of mechanics, did infinite ſervice to philoſophy, in purging it from that venerable ruſt, which, in a long ſucceſſion of ages, it had contracted.

CARTHAGENA, a large city, with one of the beſt harbours in Spain, ſituated in the province of Murcia, about twenty miles ſouth of that city: weſt longitude 1° 5′, and north latitude 37° 40′.

It is a biſhop's ſee.

New CARTHAGENA, the capital of a province of the ſame name, in South America, ſituated on a kind of peninſula: weſt long. 77°, and north lat. 11°.

It is one of the largeſt and beſt fortified towns in South America.

CARTHAMUS, BASTARD-SAFFRON, in botany, a genus of plants belonging to the ſyngeneſia-polygamia-æqualis claſs; the compound flower is uniform and tubulous; the proper one monopetalous, of a funnel-form, with a limb divided into five erect, and almoſt equal parts. There is no pericarpium, but a connivent cup contains ſolitary ſeeds. See plate XXXVII. fig. 4.

The ſeeds of this plant are ſaid to purge watery and viſcid humours, and deterge the mucus, which frequently adheres to the inner coats of the ſtomach; but they are very little uſed in compoſition, and hardly ever occaſionally preſcribed.

CARTHUSIANS, a religious order, founded in the year 1080, by one Bruno. Their rules are very ſevere. They are not to go out of their cells, except to church, without leave of their ſuperior; nor ſpeak to any perſon without leave. They muſt not keep any portion of their meat or drink till next day: their beds are of ſtraw, covered with a felt; their cloathing two hair cloths, two cowls, two pair of hoſe, and a cloak, all coarſe. In the refectory, they are to keep their eyes on the diſh, their hands on the table, their attention on the reader, and their hearts fixed on God. Women are not allowed to come into their churches.

CARTHUSIAN-POWDER, the ſame with kermes mineral. See the article KERMES.

CARTILAGE, in anatomy, a body approaching much to the nature of bones; but lubricous, flexible, and elaſtic. It contains either none at all, or, at the utmoſt, but very little of the medullary matter, and ſerves for various uſes; as to prevent the bones from being damaged by a continual friction; to join them together by a ſychondroſis; and to contribute, in a great meaſure, to the formation of ſeveral parts; for inſtance, the larynx, the noſe, the ears, &c. See the articles LARYNX, NOSE, &c.

Cartilages are of various figures, obtaining various names from the things they reſemble. There is a thyroide or ſcutiform cartilage, a cricoide or annular one, two arytænoide cartilages, a xiphoide or enſiform one, and ſo of the reſt. See the articles THYROIDE CARTILAGE, CRICOIDES, &c.

Of the cartilages that unite the bones together, ſome join them ſo firmly, as to allow no ſenſible motion, as in the ſymphyſis of the oſſa pubis; and others, in ſuch a manner, as to allow of different motions, as in thoſe by which the bodies of the vertebræ are connected. The firſt grow eaſily hard, the other appear, in ſome meaſure, viſcid, and retain their flexibility.

CARTILAGINOUS, ſomething belonging to, or partaking of the nature of a cartilage.

CARTILAGINOUS FISHES, or thoſe with cartilaginous fins, conſtitute a claſs or order of fiſhes, otherwiſe called chondropterygious. See CHONDROPTERYGII.

CARTILAGINOUS LEAF, that ſurrounded with a margin, thicker indeed than the reſt, but of the ſame ſubſtance.

CARTMEL, a market-town of Lancaſhire, about ten miles north-weſt of Lancaſter: weſt longitude 2° 40′, and north latitude 54° 15′.

CARTON, or CARTOON, in painting, a deſign drawn on ſtrong paper to be afterwards calked through, and transferred on the freſh plaſter of a wall to be painted in freſco.

Carton is alſo uſed for a deſign coloured, for working in moſaic, tapeſtry, &c. The cartons at Hampton-court are deſigns of Raphael Urbin, intended for tapeſtry.

CARTOUCHE, in architecture and ſculpture, an ornament repreſenting a ſcroll of paper. It is uſually a flat member, with wavings, to repreſent ſome inſcription, device, cypher, or ornament of armoury. They are, in architecture, much the ſame as modillions; only theſe are ſet under the cornice in wainſcotting, and thoſe under the cornice at the eaves of a houſe.

CAR-

CARTOUCHE, in the military art, a caſe of wood, about three inches thick at the bottom, girt with marlin, holding about four hundred muſket balls, beſides ſix or eight balls of iron, of a pound weight, to be fired out of a hobit, for the defence of a paſs, *&c.*

A cartouche is ſometimes made of a globular form, and filled with a ball of a pound weight; and ſometimes it is made for the guns, being of ball of half or quarter pound weight, according to the nature of the gun, tied in form of a bunch of grapes, on a tompion of wood, and coated over. Theſe were made in the room of partridge ſhot.

CARTOUCHE is alſo uſed to denote the ſame as a cartridge. See CARTRIDGE.

CARTRIDGE, in the military art, a caſe of paſteboard or parchment, holding the exact charge of a fire-arm. Thoſe for muſquets, carabines, and piſtols hold both the powder and ball for the charge; and thoſe of cannon and mortars are uſually in caſes of paſteboard or tin, ſometimes of wood, half a foot long, adapted to the caliber of the piece.

CARTRIDGE, in architecture, the ſame as cartouche. See CARTOUCHE.

CARTRIDGE-BOX, a caſe of wood or turned iron, covered with leather, holding a dozen muſquet cartridges. It is wore upon a belt, and hangs a little lower than the right pocket-hole.

CARVER, a cutter of figures or other devices in wood. See CARVING.

This is alſo the name of an officer of the table, whoſe buſineſs is to cut up the meat, and diſtribute it to the gueſts.

CARVING, that branch of ſculpture which regards cutting in wood. See the articles CUTTING *in Wood* and SCULPTURE.

CARUM, CARAWAY, in botany, a genus of the pentandria-digynia claſs of plants; the univerſal flower of which is uniform; the ſingle flower almoſt equal, conſiſting of five obtuſe, cordated petals, with inflected tops. There is no pericarpium, but the fruit is ovato-oblong, ſtriated, and ſeparable into two parts, with two ſeeds, convex, ovato-oblong, and ſtriated on one ſide, and plain on the other.

The ſeed of this plant is one of the greater hot ſeeds, ſtomachic, carminative, and good in the colic. The officinal preparations of it are the ſeeds candied with ſugar, and an oil diſtilled from the ſeed.

CARUNCULA, in anatomy, a term denoting a little piece of fleſh, and applied to ſeveral parts of the body, thus:

CARUNCULA LACRYMALIS, a little eminence, ſituated in the larger angle, or canthus of the eye, where there are alſo ſometimes hairs and certain little glands. According to ſome anatomiſts they help to keep the two puncta open when the eyes are ſhut. See the article EYE.

CARUNCULÆ MYRTIFORMES, fleſhy knobs, about the ſize of a myrtle-berry, in the parts of generation of women, which owe their origin to the breaking of the hymen; and therefore not to be found in ſubjects, in which that membrane exiſts intire. They are two, three, or four in number, and are placed where the hymen was. See the article HYMEN.

CARUNCULÆ PAPILLARES, or MAMILLARES, little protuberances on the inſide of the pelvis of the kidneys. See the articles PELVIS and KIDNEYS.

CARUNCULÆ CUTICULARES ALÆ, the ſame with nymphæ. See NYMPHÆ.

CARUNCLES, in the urethra, proceeding from a gonorrhœa, or an ulceration of the urethra, may be removed by introducing the bougie or wax candle. See the article *Medicated* CANDLE.

CARUS, in medicine, a ſudden deprivation of ſenſe and motion, affecting the whole body.

Hippocrates ſays, that though a carus is a privation of ſenſe and motion, yet the faculty of reſpiration is not at all injured; and that it is cauſed by an affection of the fore part of the brain only, the middle ventricle of the brain alſo ſuffering, by conſent of parts, ſo as to diſturb the actions of the rational faculty: but if this carus or ſopor oppreſſes reſpiration, to ſo violent a degree, as the patient cannot breathe, without great efforts, as thoſe who ſnore under a deep ſleep, it is called apoplexy; the ſolution of which is generally ſucceeded by a paraphlegy: but a carus is generally followed by a good ſtate of health. It is ſometimes taken for a heavy and profound ſleep; from which it is difficult to be raiſed. This carus differs little from a lethargy. See the article LETHARGY.

CARWAR, a town on the coaſt of Malabar, in the hither India, ſixty miles ſouth of Goa: eaſt longitude 73°, and north latitude 15°.

Here our eaſt-india company have a factory, from whence they import pepper.

CARYATIDES, or CARIATES, in architecture,

chitecture, a kind of order of columns or pillaſters, under the figure of women, dreſſed in long robes, after the manner of the carian people, and ſerving inſtead of columns, to ſupport the entablement. The caryatides ſhould always have their legs pretty cloſe to each other, and even acroſs, or one athwart the other; their arms laid flat to their bodies, or to the head; and as little ſpread as poſſible: when they are inſulated, they ſhould never have any great weight to ſupport; and they ought always to appear in characters proper to the place they are uſed in.

CARYOCOSTINUM, in pharmacy, an electuary, chiefly prepared of cloves, white coſtus, ginger, cummin-ſeeds, *&c.* much recommended for purging choler, and breaking away obſtructions of cachectic conſtitutions; alſo an excellent purge for ſtrong people.

CARYOPHYLLEOUS, an appellation given to ſuch flowers as reſemble the pink. According to Tournefort, the plants with caryophylleous flowers, conſtitute a particular claſs by themſelves. See the article BOTANY.

CARYOPHYLLUS, the CLOVE-TREE, in botany, a genus of the polyandria monogynia claſs; the flower of which conſiſts of four roundiſh, crenated petals, leſs than the cup: the fruit is oval, containing one cell, and umbilicated; the ſeed is ſingle, oval, and large. See plate XXXVII. fig. 5.

This fruit is not ſo much uſed in medicine, *per ſe*, as in ſeaſoning of food: their eſſential oil, of which they yield great plenty, is uſed in many things, particularly cathartic compoſitions. It is much uſed for the tooth-ach, dropped on a little cotton or lint, and ſtuffed into the hollow of the tooth, or held as near as can be to the part affected. The clove gilly-flowers are aromatic, and very grateful to the ſmell and taſte.

CARYOPHYLLUS, the PINK, in botany, the ſame with the dianthus of Linnæus. See the article DIANTHUS.

CARYOTA, in botany, a genus of plants, the claſs of which is not yet perfectly aſcertained; the male and female flowers are produced in ſeparate parts of the ſame ſpadix: the corolla is divided into three hollow, lanceolated ſegments; the ſtamina are numerous filaments, longer than the corolla; the antheræ are linear; the corolla in the female flower is divided into two very ſmall accuminated ſegments; the fruit is a round berry, containing a ſingle cell: the ſeeds are two, large, oblong, rounded on one ſide, and flatted on the other.

CASAL, the capital of the dutchy of Montferrat, in Italy, ſituated on the river Po, forty-five miles eaſt of Turin; eaſt longitude 8° 35′, and north latitude 45°.

CASAL MAJOR, a town of the Milaneſe, ſituated on the north ſide of the river Po, about twenty miles eaſt of Cremona; eaſt longitude 11°, and north latitude 45° 5′.

CASAN, or KASAN, a province of Ruſſia, lying between the province of Moſcow on the weſt, and Siberia on the eaſt.

CASBIN, or CASWIN, a city of Perſia, in the province of Eyrac Agem, about one hundred and eighty miles north of Iſpahan: eaſt long. 48°, and north lat. 46°.

CASCABEL, the knob or button at the end of the breech of a cannon. See CANNON.

CASCADE, a ſteep fall of water from a higher into a lower place.

They are either natural, as that at Tivoli, *&c.* or artificial, as thoſe of Verſailles, *&c.* and either falling with gentle deſcent, as thoſe of Sceaux; or in form of a buffet, as at Trianon; or down ſteps, in form of a perron, as at St. Clou; or from baſon to baſon, *&c.*

CASCAIS, a town of Eſtremadura, in Portugal, ſituated at the mouth of the river Tagus, ſeventeen miles eaſt of Liſbon: weſt longitude 10° 15′, and north latitude 38° 40′.

CASCANS, in fortification, holes in form of wells, ſerving as entries to galleries to give vent to the enemies mines.

CASCHAW, or CASSOVIA, a city of upper Hungary, ſituated on the river Horat, ſeventy-eight miles north eaſt of Buda: eaſt longitude 20° 35′, and north latitude 40°.

CASE, *caſus*, among grammarians, implies the different inflections or terminations of nouns, ſerving to expreſs the different relations they bear to each other, and to the things they repreſent.

There is great diverſity among grammarians, with regard to the nature and number of caſes: they generally find ſix, even in moſt of the modern languages, which they call the nominative, genitive, dative, accuſative, vocative, and ablative; but this ſeems in compliance with their own ideas of the greek and latin, which they tranſfer to their own languages. The termination is not the ſole criterion of a caſe, for though ſome authors reckon five caſes of nouns in the greek, and ſix in the latin; yet ſeveral of

of theſe caſes are frequently alike: as the genitive and dative ſingular of the firſt and fifth declenſions of the latin; the dative and ablative plural of all the declenſions, &c. the genitive and dative dual of the greek, &c.

The engliſh and many other modern languages expreſs the various relations not by changes in the terminations, as the antients, but by the appoſition of articles: it is certainly wrong to ſay, that *of a father* is the genitive caſe of *father*, and *to a father* the dative; for *of* and *to* are no part of the word *father*, they are only articles or modifications, which ſhew the different relation of the word father.

CASE, among printers, denotes a ſloping frame, divided into ſeveral compartments, containing a number of types or letters of the ſame kind.

From theſe compartments the compoſitor takes out each letter as he wants it, to compoſe a page or form. Thus they ſay a caſe of pica, of greek, &c.

CASE *of crown-glaſs* contains uſually twenty-four tables, each table being nearly circular, and about three feet ſix inches diameter.

Caſe of Newcaſtle glaſs contains thirty-five tables; of Normandy glaſs twenty-five.

CASE HARDENING, a method of preparing iron, ſo as to render its outer ſurface hard, and capable of reſiſting any edged tool.

This is a leſſer degree of ſteel-making, and is practiſed by baking, calcination, or cæmentation in an oven or other cloſe veſſel, ſtratified with charcoal, and powdered hoofs and horns of animals, ſo as to exclude the air. See STEEL.

CASE-SHOT, in the military art, muſket-ball, ſtones, old iron, &c. put into caſes, and ſhot out of great guns.

CASEMENT, or CASEMATE, in architecture, a hollow moulding, which ſome architects make one ſixth of a circle, and others one fourth.

CASEMATE, or CAZEMATE, in fortification. See the article CAZEMATE.

CASERNS, in fortification, lodgings built in garriſon towns, generally near the rampart, or in the waſte places of the town, for lodging the ſoldiers of the garriſon.

There are uſually two beds in each caſern for ſix ſoldiers to lie, who mount the guard alternately; the third part being always on duty.

CASERTA, a city of the province of Lavoro, in the kingdom of Naples, about ſixteen miles north of the city of Naples: eaſt longitude 15° 5′, and north latitude 41° 10′. It is a biſhop's ſee.

CASES RESERVED, in the polity of the roman church, atrocious crimes, the abſolution of which is reſerved by the ſuperiors to themſelves or their vicars.

There are caſes reſerved by the pope, who formerly gave the abſolution in perſon, but now delegates that power to certain biſhops and prieſts: caſes reſerved by the biſhops in convents, ſome by the chapters; but at the point of death, all reſerved caſes are abſolvable by the ordinary.

The caſes reſerved by the pope, according to the ritual of Paris, are, 1. The wilful burning of churches, and alſo of other places, if the incendiary is publicly proclaimed. 2. Actual ſimony. 3. The murder or mutilation of a perſon in holy orders. 4. The ſtriking a biſhop or other prelate. 5. Furniſhing arms to the infidels. 6. Falſifying the bulls or letters of the pope. 7. Invading or pillaging the lands of the church. 8. Violating an interdiction of the pope.

CASH, in the commercial ſtile, ſignifies the ſtock of money, which a merchant, trader, or banker has at his diſpoſal in order to trade. Thus we ſay, the caſh of ſuch a banker amounts to ten, twenty, or thirty thouſand pounds.

CASH-BOOK. See the article BOOK.

CASHAN, or KASHAN, a city of the province of Eyrac-Agem, in Perſia, about one hundred miles north of Iſpahan: eaſt long. 50°, and north lat. 34°.

CASHELL, or CASHILL, a city of the county of Tipperary, in Ireland, about eighty miles ſouth-weſt of Dublin: weſt long. 7° 40′, and north lat. 52° 16′.

It is a biſhop's ſee.

CASHEW-NUT, the fruit of the acajou-tree, reckoned by Linnæus a ſpecies of anacardium. See the articles ACAJOU and ANACARDIUM.

CASHIER, a perſon who is entruſted with the caſh of ſome public company. See the articles CASH and COMPANY.

CASI, in the perſian policy, one of the two judges under the nadab, who decide all religious matters, grant all divorces, and are preſent at all public acts, having deputies in all the cities of the kingdom. See the article NADAB.

CASING *of timber work*, among builders, is the plaſtering a houſe all over on the outſide with mortar, and then ſtriking it while wet by a ruler with the corner of a trowel, to make it reſemble the joints of

of free-ſtone. Some direct it to be done upon heart laths, becauſe the mortar would, in a little time, decay the ſap laths; and to lay on the mortar in two thickneſſes, *viz.* a ſecond before the firſt is dry.

CASK, a veſſel of capacity, for preſerving liquors of divers kinds; and alſo ſometimes dry goods, as ſugar, almonds, *&c.*

A caſk of ſugar is a barrel of that commodity, containing from eight to eleven hundred weight. A caſk of almonds is about three hundred weight.

A caſk mounted is that which is ready bound with all its hoops, its bottom, and bars.

A caſk in ſtaves, that of which all the ſtaves are ready prepared, and want only to be joined and hooped. They are often ſhipped thus on board the veſſels deſigned for the american iſlands, becauſe they take leſs room, and can be eaſily made up there.

CASK, in heraldry, the ſame with helmet.

CASKETS, on board a ſhip, ſmall ropes made of ſinnet, and faſtened to gromets or little rings upon the yards. Their uſe is, to make faſt the ſail to the yard, when it is to be furled.

Breaſt CASKETS are the longeſt or biggeſt of theſe caſkets, or thoſe in the midſt of the yard betwixt the ties.

CASPIAN-SEA, a large ſea, or lake of Aſia, bounded by the province of Aſtracan on the north, and by part of Perſia on the eaſt, ſouth, and weſt. It is upwards of four hundred miles long from ſouth to north, and three hundred miles broad from eaſt to weſt.

CASSANO, a fortreſs, in the Milaneſe, in Italy, ſituated on the river Adda, about twelve miles north-eaſt of Milan: eaſt long. 10°, and north latitude 45° 20′.

CASSATION, among civilians, the act of annulling any act or procedure. The reaſons of caſſation are, 1. When a decree is directly contrary to another decree, and both againſt the ſame party. 2. When the decrees are contrary to the expreſs deciſion of ſtatutes and cuſtoms. 3. When the formalities, preſcribed by the laws, have not been obſerved.

Caſſation is properly a term in the courts of France, the laws of which country require the party, that ſues for a caſſation, to depoſite four hundred and fifty livres, which ſum is forfeited if he fails in his ſuit.

CASSAVI, or CASSADA, the ſame with the jatropha of Linnæus. See JATROPHA.

Of the root of this plant, which is oblong and thick, the Americans make a kind of bread, ſaid to be a wholeſome and nouriſhing food.

CASSEL, the capital of the landgravate of Heſſe-Caſſel, in the circle of the upper Rhine, in Germany, ſituated on the river Fulde: eaſt longitude 9° 20′, and north latitude 51° 20′.

CASSEL is alſo the name of a town in french Flanders, about fifteen miles ſouth of Dunkirk: eaſt longitude 2° 30′, and north latitude 50° 5′.

CASSIA, in botany, a genus of the decandria-monogynia claſs of plants; the flower of which conſiſts of five hollow, roundiſh petals, the lower ones larger and more diſtant than the others; the fruit is an oblong pod, divided by tranſverſe ſepta: the ſeeds are numerous, roundiſh, and affixed to the upper edges of the valves.

Caſſia is divided into three ſpecies; the caſſia fiſtula, the caſſia lignea, and the caſſia caryophyllata. The firſt is the caſſia of the ſhops, the ſoft freſh pulp of which is an excellent mild cathartic: it is given, with ſucceſs, in inflammatory fevers, and in diſorders of the breaſt, kidneys, and bladder. The caſſia lignea, or caſſia bark, much reſembles the cinnamon: it is a ſtomachic and cordial, but poſſeſſes theſe virtues in a leſs degree than cinnamon; it is alſo uſed in the venice-treacle, mithridate, *&c.* The third, being the caſſia caryophyllata, or clove bark, is a ſtomachic, carminative, and alexipharmic. See the articles CARYOPHYLLUS and CARMINATIVE.

CASSIDA, in zoology, a genus of inſects, of the order of the coleoptera, with filiform or thread-like antennæ, thickeſt towards the extremities: add to this, that the thorax is plain and marginated. Of this genus there are a great many ſpecies, ſome green, ſome grey, but moſt black; all which have been confounded, by authors, with the beetles, and called in engliſh tortoiſe-beetles.

CASSIMERE, the capital city of a province of the ſame name in the hither India: eaſt longitude 75°, and north latitude 35°. It was once the capital of a kingdom, and is ſtill ſometimes the reſidence of the mogul.

CASSINE, the CASSIA-BERRY-TREE, in botany, a genus of the pentandria-digynia claſs of plants: the flower of which is patent, divided into five ſuboval, obtuſe ſegments larger than the cup; the fruit

fruit is a roundiſh berry with three cells, containing ſolitary ſuboval ſeeds. This plant is uſed in ſouth America in the ſame manner as tea.

CASSIOPEIA, in aſtronomy, a conſtellation of the northern hemiſphere, ſituated oppoſite to the great bear, on the other ſide of the pole. The ſtars of this conſtellation, in Ptolemy's catalogue, are thirteen; in Tycho's, twenty-eight; and in Mr. Flamſtead's, fifty-ſix.

In the year 1572, a remarkable new ſtar appeared in this conſtellation, ſurpaſſing ſirius or lyra in brightneſs and magnitude. It appeared even bigger than jupiter, which, at that time, was near his perigee, and by ſome was thought equal to venus, when ſhe is in her greateſt luſtre; but, in a month, it began to diminiſh in luſtre, and, in about eighteen months, entirely diſappeared.

CASSIS, the HELMET-SHELL, in natural hiſtory, a ſpecies of murex. See the article MUREX.

CASSITERIA, in the hiſtory of foſſils, a genus of cryſtals, the figures of which are influenced by an admixture of ſome particles of tin.

The caſſiteria are of two kinds: the whitiſh pellucid caſſiterion, and the brown caſſiterion; the firſt is a tolerably bright and pellucid cryſtal, and ſeldom ſubject to the common blemiſhes of cryſtal: it is of a perfect and regular form, in the figure of a quadrilateral pyramid, and is found in Devonſhire and Cornwall principally. The brown caſſiterion is like the former in figure: it is of a very ſmooth and gloſſy ſurface, and is alſo found in great plenty, in Devonſhire and Cornwall.

CASSOCK, or CASSULA, a kind of robe or gown, wore over the reſt of the habit, particularly by the clergy.

The word caſſock comes from the french *caſaque*, an horſeman's coat; ſome derive that again from the garment of the Coſſaques.

CASSOWARY, in ornithology, makes a diſtinct genus of birds, of the order of the gallinæ; the characters of which are theſe: its feet have each three toes, all placed foreward; and its head is ornamented with a kind of bony comb and naked wattles.

There is only one ſpecies of this genus, which is a robuſt, large, and thick bird, meaſuring four feet and an half when it ſtretches out its neck. See plate XXXVII. fig. 6.

CASSUMBAZAR, a town of India, in Aſia, ſituated on the river Ganges, in the province of Bengal: eaſt longitude 37°, and north latitude 24°.

CASSUMUNAR, in the materia medica, a root approaching to that of zedoary. It is cardiac and ſudorific, and famous in nervous caſes: it is alſo an ingredient in many compoſitions, and is preſcribed in powders, boluſſes, and infuſions. Its doſe is from five to fifteen grains.

CASSYTA, in botany, a genus of the triandria-monogynia claſs of plants; the calyx of which is a ſmall permanent perianthium, divided into three indentures: the corolla conſiſts of a ſingle petal, divided into three ſegments; the fruit is an oval berry, conſiſting of one cell, in which is a ſingle ſeed.

CASTANEA, the CHESNUT, in botany, is comprehended by Linnæus under fagus. See the article FAGUS.

CASTANET, a muſical inſtrument of the pulſative kind, wherewith the Moors, Spaniards, and Bohemians accompany their dances, ſarabands, and guittars, ſerving only to direct the time.

It conſiſts of two little round pieces of wood, dried and hollowed, in the manner of a ſpoon; the concavities whereof are placed on one another, faſtened to the thumb, and beat, from time to time, with the middle finger, to direct their motions and cadences: they may beat eight or nine times in the ſpace of a meaſure or ſecond of a minute.

CASTANOVITZ, a town of Croatia, ſituated on the river Unna, which divides Chriſtendom from Turky: eaſt longitude 17° 20′, and north latitude 45° 40′.

It is ſubject to the houſe of Auſtria.

CASTEL-ARAGONESE, a fortreſs of Sardinia, ſituated on the north-weſt coaſt of that iſland: eaſt longitude 8° 45′, and north latitude 41°.

CASTEL-BAR, a town of Ireland, in the county of Mayo, and province of Connaught, about thirty eight miles north of Gallway: weſt long. 9° 24′, north lat. 53° 25′.

CASTEL BRANCO, a city of the province of Beira, in Portugal, about ninety-five miles north-eaſt of Liſbon: weſt long. 8°, north latitude 39° 35′.

CASTEL DE VIDE, a town of Alentejo, in Portugal, about twelve miles eaſt of Portalegre, and thirty-five weſt of Alcantara: weſt longitude 7° 40′, north latitude 39°.

CASTEL-RODRIGO, a town of Portugal, in

in the province of Traloſmontes, ſituated thirty miles north-weſt of the city Rodrigo: weſt long. 7°, north lat. 41°.

CASTELLA, a town of the Mantuan, in Italy, about five miles north-eaſt of the city of Mantua: eaſt longitude 11° 15′, north latitude 45° 30′.

CASTELLAN, the name of a dignity or charge in Poland: the caſtellans are ſenators of the kingdom, but ſenators only of the lower claſs, who, in diets, ſit on low ſeats, behind the palatines, or great ſenators. They are a kind of lieutenants of provinces, and command a part of the palatinate under the palatine.

CASTELLANY, the territory belonging to any city or town, chiefly uſed in France and Flanders: thus we ſay, the caſtellany of Liſle, Ypres, &c.

CASTIGLIONE, a fortified town in the dutchy of Mantua, about twenty miles north-weſt of the city of Mantua: eaſt longitude 11°, north latitude 45° 15′.

CASTILE, the name of two inland provinces of Spain, ſituated almoſt in the middle of that kingdom: the moſt ſoutherly one is called New Caſtile, and the other, towards the north, Old Caſtile; Madrid being the capital of the former, and Burges of the latter.

CASTILE DE ORO, a name given by the Spaniards to a province of Terra Firma, on their firſt planting it.

CASTILLAN, or CASTILLANE, a gold-coin, current in Spain, and worth fourteen rials and ſixteen deniers.

CASTILLAN is alſo a weight uſed in Spain for weighing gold. It is the hundredth part of a pound ſpaniſh weight.

What they commonly call a weight of gold in Spain, is always underſtood of the caſtillan.

CASTILLARA, a town of the Mantuan, in Italy, ſituated ſix miles north-eaſt of the city of Mantua: eaſt long. 11° 25′, north lat. 45° 20′.

CASTILLON, a town of Perigort, in the province of Guienne, in France, ſituated on the river Dordonne, ſixteen miles eaſt of Bourdeaux: weſt long. 2° 40′, north latitude 44° 50′.

CASTING, in foundery, the running of a metal into a mould, prepared for that purpoſe.

CASTING *of candles*, is the filling the mould with tallow.

CASTING *of lead on cloth*, is the uſing a frame, or mould, covered with woolen cloth, and linen over it, to caſt the lead into fine ſheets.

CASTING *of metals, of letters, bells, figures*, &c. See the article FOUNDERY.

CASTING *in ſand or earth*, is the running of metals between two frames, or moulds, filled with ſand or earth, wherein the figure that the metal is to take, has been impreſſed *in creux*, by means of the pattern.

CASTING *in ſtone or plaſter*, is the filling with fine liquid plaſter a mould that has been taken in pieces off a ſtatue, or other piece of ſculpture, and run together again.

CASTING, in falconry, any thing that is given a hawk to cleanſe and purge his gorge: of theſe there are two ſorts, feathers and cotton; the latter whereof is given in pellets, about the bigneſs of a hazel-nut, conveyed into his gorge after he hath ſupped. If, in the morning, he has caſt them out round, while not ſtinking, nor very wateriſh, he may be concluded to be ſound; if otherwiſe, he is unſound. The caſting of plumage is obſerved after the ſame way as that of cotton.

CASTING, in joining, &c. Wood is ſaid to be caſt or warped, when either by its own drought, or moiſture of the air, or other accidents, it ſhoots or ſhrinks, altering its flatneſs or ſtraightneſs, and becoming crooked.

CASTLE, a fortreſs or place rendered defenceable, either by nature or art.

A caſtle is a fort, or little citadel. See the article CITADEL.

It frequently ſignifies with us the principal manſion of noblemen.

In the time of Henry II. there were no leſs than 1115 caſtles in England, each of which contained a manor.

CASTLE, in the ſea-language, is a part of the ſhip, of which there are two, the fore-caſtle, being the elevation at the prow, or the uppermoſt deck, towards the mizen, the place where the kitchens are. Hind-caſtle is the elevation which reigns on the ſtern, over the laſt deck, where the officers cabbins and places of aſſembly are.

CASTLE-CAREY, a market-town of Somerſetſhire, ſituated ten miles ſouth eaſt of Wells: weſt longitude 2° 40′, north latitude 51° 15′.

CASTLE-RISING, a borough-town of Norfolk, ſituated near the ſea coaſt, about thirty miles weſt of Norwich, and ſeven north of Lynn: eaſt longitude 40°, north latitude 52° 46′.

It ſends two members to parliament.

CASTLE-WARD, or CASTLE-GUARD, a

tax

tax laid on ſuch as dwell within a certain diſtance of a caſtle, towards the maintenance of thoſe that watch and ward the caſtle: the word is ſometimes uſed for the circuit itſelf, inhabited by ſuch as are ſubject to this ſervice.

CASTLE-WORK, ſervice or labour done by inferior tenants, for the building and upholding of caſtles of defence, towards which ſome gave their perſonal aſſiſtance, and others paid their contributions. This was one of the three neceſſary charges to which all lands, among our ſaxon anceſtors, were expreſly ſubject.

CASTON, a market-town of Norfolk, about eight miles north-weſt of Norwich: eaſt long. 1° 20′, north lat. 52° 45′.

CASTOR, the BEAVER, in zoology, a genus of quadrupeds, of the order of the glires, the feet of which have each five toes, and the hinder ones are formed for ſwimming.

Under this genus are comprehended, 1. The beaver, properly ſo called, with a black, flat, and oval tail: this ſpecies produces this caſtoreum. 2. The caſtor, with a flat, lanceolated, or oblong tail, called by Cluſius the exotic water-rat. 3. The round-tailed great water-rat. See plate XXXVII. fig. 7. which repreſents the common beaver.

CASTOR, in aſtronomy, a moiety of the conſtellation of gemini, called alſo Apollo. See the article GEMINI.

CASTOR and POLLUX, two meteors which ſometimes, in a ſtorm at ſea, appear ſticking to ſome part of the ſhip, in the ſhape of two fire-balls: when only one is ſeen, it is more properly called Helena. The two together are adjudged to portend a ceſſation of the ſtorm: but one alone portends ill, and that the ſevereſt part of the tempeſt is yet to come: both theſe balls are by ſome called Tyndarides.

CASTOR is alſo the name of a market-town of Lincolnſhire, twenty miles north-eaſt of Lincoln: weſt longitude 12′, and north latitude 53° 30′.

CASTOREUM, CASTOR, in the materia medica, is by many miſtaken for the teſticles of the caſtor or beaver, though in fact, a peculiar ſecreted matter, contained in bags deſtined to receive it, in the manner of the muſk and civet: yet ſituated differently in the animal. See the article CASTOR.

Caſtoreum is an indurated ſubſtance, formed of a matter once fluid, the thinner part of which has been evaporated in drying. It is a light and friable matter, of a moderately lax texture, and of a deep duſky brown colour. It is of a ſomewhat acrid and bitteriſh taſte, and of a ſtrong, and, to many people, a very diſagreeable ſmell. It is brought to us in the bags which naturally contain it while in the animal: and theſe ſo much reſemble the teſticles of an animal both in their dry ſtate, and when on the body of the creatures, that we are not to wonder people who had not examined their ſituation on the animal really took them for ſuch. Theſe bags are always joined two together; they are equal in ſize and of an oblong form; they are placed ſide by ſide in their natural ſituation in one bag, which contains them both. This bag is ſometimes ſent over to us with them, but much oftener they are ſent without it, the cuſtom of the people, who ſell it to the merchants, being to take out the two bags from the common membrane, and hang them up in a chimney to dry. In which operation they acquire the brown colour we ſee them of, their original one being a pale fleſh colour.

It is a very valuable medicine, of great uſe in hyſteric caſes, and in all diſorders of the nerves. It attenuates viſcuous humours, promotes the menſes, and reſiſts putrefaction. It is good alſo in epilepſies, palſies, and all complaints of that kind. See the article CASTOR.

CASTRATION, in ſurgery, the operation of gelding.

It was prohibited by a decree of the ſenate of Rome under Hadrian; and the cornelian law ſubjected the perſon who performed the operation, to the ſame penalties as the perſon on whom it was performed, although it was done with his conſent.

Caſtration is much in uſe in Aſia and Turkey, where it is practiſed upon the ſlaves, to prevent any commerce with their women. In Italy, caſtration is frequent from another motive, namely, to preſerve the voice for ſinging. It is ſometimes found neceſſary in chirurgical caſes, as in a ſarcocele and cancer of the teſticles. For the method, therefore, of performing this operation, ſee the article SARCOCELE.

CASTREL, or KESTREL, a ſort of hawk which in ſhape reſembles the lanner, but in ſize the hobby. Her game is the growſe; but as ſhe is a ſlow cowardly bird, ſhe is not much uſed.

CASTRES, a city of Languedoc, in France, about thirty-five miles east of Tholouſe: east longitude 2°, and north latitude 43° 40′.
It is a biſhop's ſee.

CASTRO, the capital of the iſland of Chiloe, on the coaſt of Chili, in ſouth America: weſt long. 82°, ſouth latit. 43°.

CASTRO is alſo the capital of a dutchy of the ſame name in the pope's territories, in Italy, ſituated on the confines of Tuſcany: eaſt longitude 12° 35′, north latitude 42° 30′.

CASTRO is likewiſe a town in the territory of Otranto, in the kingdom of Naples, about ſeven miles ſouth of Otranto: eaſt longitude 19° 25′, north latitude 40° 8′.

CASTRO MARINO, a town in the province of Algarva, in Portugal, ſituated near the mouth of the river Guadiana, on the confines of Andaluſia, weſt long. 8° 15′, north latitude 37°.

CASU CONSIMILI, in law, a writ of entry granted where a tenant, by courteſy or for life, aliens either in fee, in tail, or for the term of another's life. It is brought by him in reverſion againſt the perſon, to whom ſuch tenant does ſo alien to the prejudice of the reverſioner, in the tenant's life time.

CASU PROVISO, in law, a writ of entry founded on the ſtatute of Glouceſter, where a tenant in dower aliens the lands ſhe ſo holds in fee, or for life; and lies for the party in reverſion againſt the alienee.

CAT, *felis*, a well-known quadruped, of the order of the feræ, or beaſts of prey. See the article FELIS.
The domeſtic cat is diverſified with an almoſt infinite variety of colours and ſtreaks; but the natural colour, in a wild ſtate, is a brown tawney, variegated with ſtreaks of a pale whitiſh colour. In France, the cats are all of a bluiſh lead-colour; and, in the north of Europe, they are all over white. See plate XXXVIII. fig. 1. which repreſents the common cat.

CAT-MINT, in botany, the engliſh name of the nepeta of botaniſts. See NEPETA.

CAT-HARPINGS, in a ſhip, ſmall ropes running in little blocks from one ſide of the ſhrowds to the other, near the deck. Their uſe is to force the ſhrowds, and make them taught, for the more ſecurity and ſafety of the maſts.

CAT, or CAT-HEAD, on ſhipboard, a ſhort piece of timber in a ſhip, lying aloft right over the hawſe, having at one end two ſhivers, wherein is reeved a rope, with a great iron hook faſtened to it, called CAT-HOOK. Its uſe is to trice up the anchor, from the hawſe to the top of the fore-caſtle.

CAT-ROPE. See the article ROPE.

CAT-HOLES, in a ſhip, are over the parts as right with the capſtan as they can be: their uſe is to heave the ſhip aſtern, upon occaſion, by a cable, or a hawſe, called ſtern-faſt. See the article STERN-FAST.

CAT *of the mountain*, *catus pardus*, an animal of the cat-kind, about the ſize of a maſtiff, variegated with longitudinal black ſtreaks on the upper part of the body, and black ſpots on the under part. See plate XXXVIII. fig. 2.

CATABIBAZON, in aſtronomy, the moon's deſcending node, called alſo dragon's tail. See the article NODE.

CATACAUSTIC CURVES, in the higher geometry, that ſpecies of cauſtic curves which are formed by reflection. See the article CAUSTIC CURVE.
Theſe curves are generated after the following manner. If there be an infinite number of rays as AB, AC, AD, &c. (plate XXXVIII. fig. 3.) proceeding from the radiating point A, and reflected at any given curve BDH, ſo that the angles of incidence be ſtill equal to thoſe of reflection; then the curve BEG, to which the reflected rays BI, CE, DF, &c. are tangents continually, as in the points I, E, F, is called the catacauſtic curve.
If the reflected IB be produced to K, ſo that AB=BK, and the curve KL be the evolute of the catacauſtic BEG, beginning at the point K; then the portion of the catacauſtic BE=AC—AB+CE—BI continually. Or if any two incident rays as AB, AC be taken, that portion of the cauſtic that is evolved while the ray AB approaches to a coincidence with AC, is equal to the difference of thoſe incident rays + the difference of the reflected rays. When the given curve is a geometrical one, the catacauſtic will be ſo too, and always rectifiable.
The catacauſtic of a circle is a cycloid, formed by the revolution of a circle along a circle. The cauſtic of the vulgar ſemicycloid, when the rays are parallel to the axis is alſo a vulgar cycloid, deſcribed by the revolution of a circle upon the ſame baſe. The cauſtic of the logarithmic ſpiral is the ſame curve, only ſet in a different poſition.

CATACHRESIS, in rhetoric, a trope which

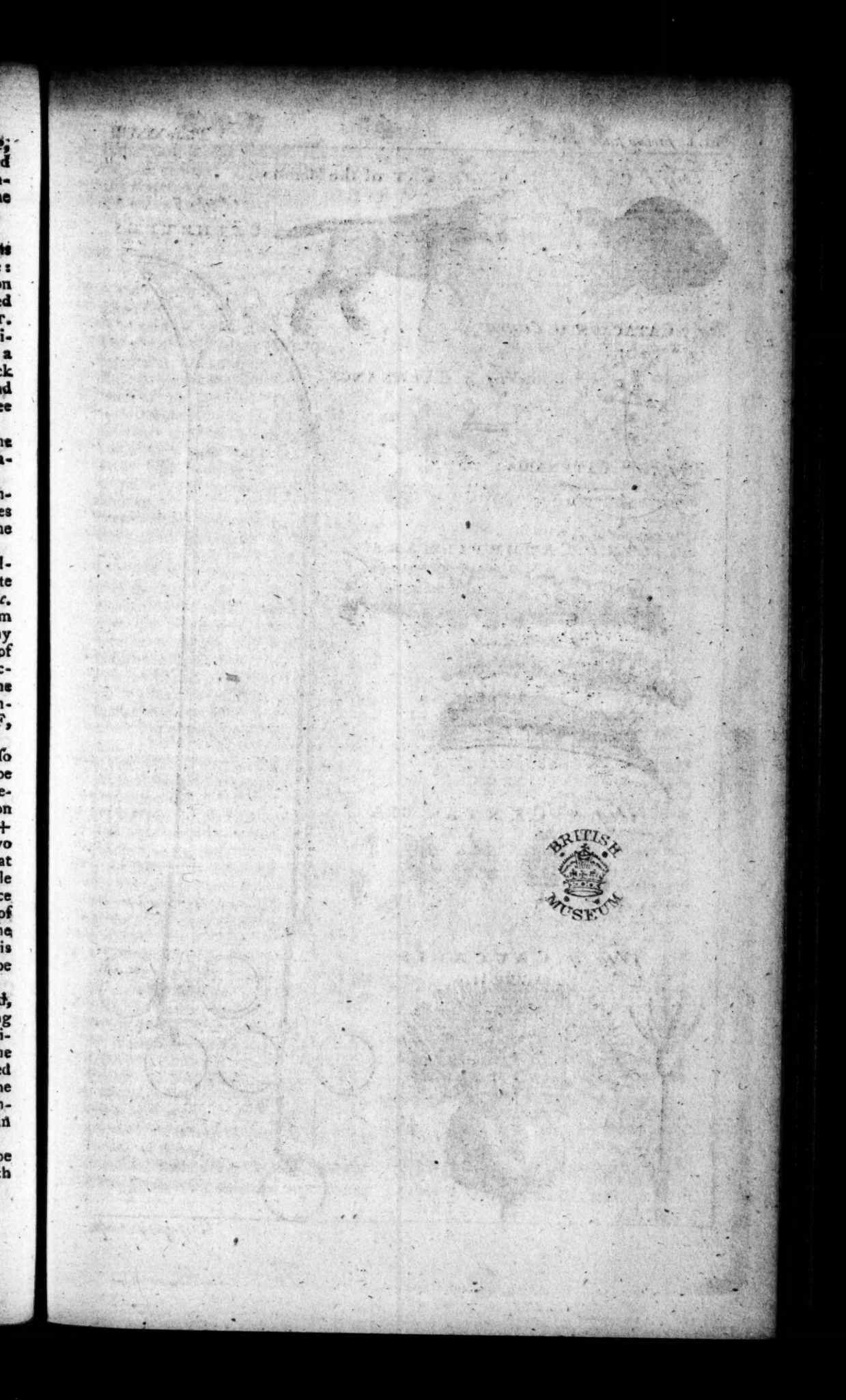

BRITISH MUSEUM

Fig. 1. CAT.



Fig. 2. CAT of the Mountain.



Fig. 7. CATHETERS.

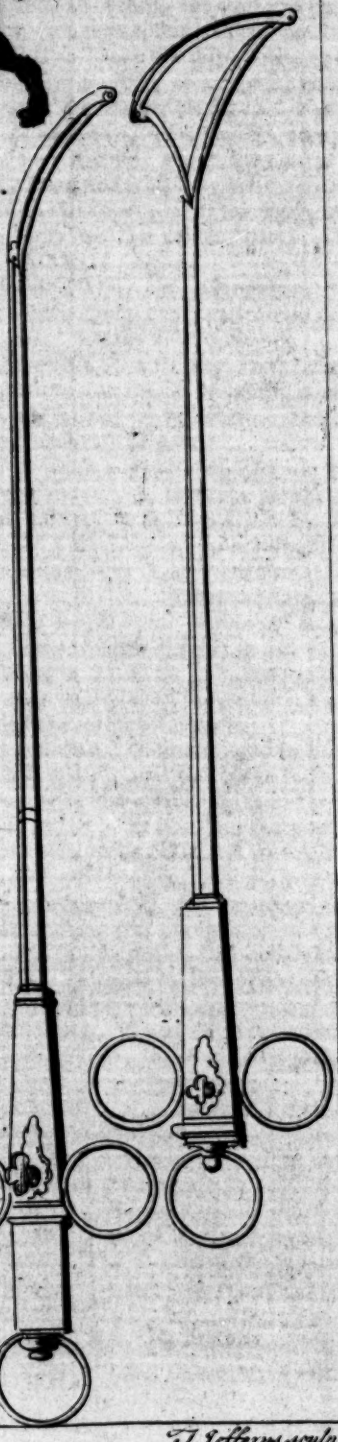


Fig. 3. CATACAUSTIC CURVE.

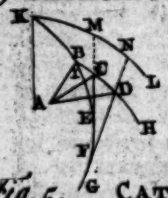


Fig. 4. CATANANCE.



Fig. 5. CATENARIA.



Fig. 6. CATERPILLARS.

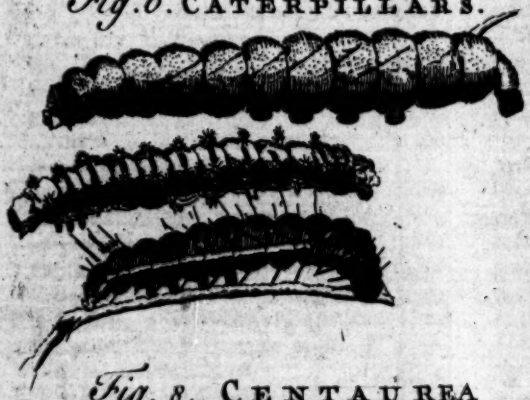


Fig. 8. CENTAUREA



Fig. 9. CAUCALIS.



J. Jefferys sculp.

which borrows the name of one thing to expreſs another. Thus Milton deſcribing Raphael's deſcent from the empyreal heaven to paradiſe, ſays,

"Down thither prone in flight
"He ſpeeds, and thro' the vaſt ethereal
"ſky
"Sails between worlds and worlds.

CATACOMB, a grotto or ſubterraneous place for the burial of the dead.

The term is particularly uſed in Italy, for a vaſt aſſemblage of ſubterraneous ſepulchres, three leagues from Rome, in the *via appia*, ſuppoſed to be the ſepulchres of the antients. Others imagine theſe catacombs to be the cells wherein the primitive chriſtians hid themſelves. Each catacomb is three foot broad, and eight or ten high, running in form of an alley or gallery, and communicating with one another.

Some authors ſuppoſe them to have been the *puticuli* mentioned by Feſtus Pompeius, into which the Romans threw the bodies of their ſlaves, to whom they denied the honours of burying: and Mr. Monro, in the philoſophical tranſactions, gives it as his opinion, that the catacombs were the burial places of the firſt Romans, before the practice of burning the dead was introduced; and that they were dug in conſequence of theſe opinions, that ſhades hate the light, and love to hover about the place where their bodies were laid.

CATACOUSTICS, an appellation given to the doctrine of reflected ſounds, called alſo cataphonics.

CATADIOPTRICAL TELESCOPE, that otherwiſe called a reflecting one. See the article TELESCOPE.

CATADUPA, a water-fall, or cataract. See the article CATARACT.

Hence the inhabitants about the cataracts of the Nile, were called catadupi by the antients.

CATAFALCO, in architecture, a decoration of ſculpture, painting, &c. raiſed on a timber ſcaffold, to ſhew a coffin or tomb in a funeral ſolemnity.

CATALEPSY, *catalepſis*, in medicine, the ſame with catoche. See CATOCHE.

CATALLIS CAPTIS NOMINE DISTRICTIONIS, in law, a writ which lies where a houſe is within a borough, for rent iſſuing out of the ſame: and this writ warrants the taking of doors or windows by way of diſtreſs.

CATALLIS REDENDIS, a writ that lies where goods being delivered to perſons to keep until a certain day, are not on demand delivered on that day.

CATALOGUE, a liſt or enumeration of the names of ſeveral books, men, or other things, according to a certain order.

In compiling a catalogue of all the authors who have wrote on any particular branch of ſcience, Morhof gives it as his opinion, that it ſhould exhibit a ſynopſis of all the books in that ſcience, whether publiſhed or in manuſcript; that the names of the authors ſhould be ranged in the order of the years when their works were publiſhed; and, thirdly, that a catalogue ſhould be added of the works themſelves, in the order of time alſo; and that each of theſe ſhould comprehend a ſummary, not only of the chapters, but of the contents of theſe chapters. We have likewiſe, in the ſame author, an account of the moſt remarkable catalogues, and writers of catalogues, of different nations, to which we refer thoſe who deſire to be more fully informed in this ſubject.

CATALOGUE *of the ſtars*, is a liſt of the fixed ſtars diſpoſed in their ſeveral conſtellations, with the longitudes and latitudes of each.

The moſt renowned compoſers of theſe catalogues are, 1. Ptolemy, who added his own obſervations to thoſe of Hipparchus Rhodius, about the year of Chriſt 880. 2. Ulugh Beigh made a catalogue of the fixed ſtars in 1437. 3. Tycho Brahe determined the places of 777 ſtars for the year 1600. 4. William Landgrave of Heſſe, with his mathematicians, determined the places of 400 fixed ſtars. 5. In the year 1667, Dr. Halley, in the iſland of St. Helena, obſerved 350 not viſible in our horizon. And, 6. J. Hevelius, adding his own obſervations to thoſe of the antients, and of Dr. Halley, made a catalogue of 1888. But the laſt and greateſt is the britannic catalogue, a performance the moſt perfect of its kind, compiled from the obſervations of the accurate Mr. Flamſtead, who with all the talents and apparatus requiſite for ſuch an undertaking, devoted himſelf to that work for a long ſeries of years. It contains 2734 ſtars.

CATALONIA, a province of Spain, bounded by the Pyrenean mountains, which divide it from France, on the north; by the Mediterranean, on the eaſt and ſouth; and by the provinces of Aragon and Valencia, on the weſt.

CATAMENIA, in medicine, the ſame with the menſes. See MENSES.

CATAMITE, a boy kept for ſodomitical practices. See the article SODOMY.

CATANANCE, or CATANANCHE, in botany, a genus of plants belonging to the ſyngeneſia-polygamia claſs, the compound flower of which is often imbricated and uniform: the proper flower is monopetalous, ligulated, linear, longer than the cup, truncated and quinquedentated; there is no pericarpium. The ſeeds are ſolitary, compreſſed, and crowned with a little cup of four or five hairs. See plate XXXVIII. fig. 4.

CATANIA, a city and port-town of Sicily, about thirty-five miles north of Syracuſe, near the foot of mount Ætna: eaſt longitude 15°, north latitude 38°.

CATAPAN, a name given by the greek emperors to the governor of Puglia and Calabria in Italy. They ſucceeded the exarchs of Ravenna; and Du Cange is of opinion, a chronological table of theſe governors might be very ſerviceable for underſtanding the byzantine hiſtorians.

CATAPASM, among antient phyſicians, ſignifies any dry medicine reduced to powder, in order to be uſed by way of inſpiration in the whole body, or any part of it. Some catapaſms are appropriated to ulcers, ſome to the ſkin: the former cicatrize, the latter are deterſive. We learn from Pliny, that catapaſms of roſes were uſed to reſtrain ſweat, and to dry the body after bathing.

CATAPELTÆ, or CATAPULTA, in antiquity. See the article CATAPULTA.

CATAPHONICS, the ſcience which conſiders the properties of reflected ſounds. See the article ECHO.

CATAPHORA, in medicine, the ſame as coma. See the article COMA.

CATAPHRACTA, in antiquity, a kind of coat of mail, which covered the ſoldier from head to foot.

Hence cataphracti were horſemen armed with the cataphracta, whoſe horſes, as Salluſt ſays, were covered with linen full of iron plates diſpoſed like feathers.

CATAPHRACTUS, or POGGE, in zoology, a fiſh of the cottus-kind, with an octagonal body, and a great many cirri, or beards. See the article COTTUS.

CATAPHRYGIANS, antient heretics, who took their name from the country of Phrygia. They ſuppoſe the holy ſpirit had abandoned the church, and therefore that Montanus, as a prophet, and Priſcilla and Maximilla, as true propheteſſes, were to be conſulted in every thing relating to religion.

CATAPLASM, an external topical medicine, of a ſoft conſiſtence, and prepared of ingredients of different virtues, according to the intention of the phyſician. Hence there are different ſorts of cataplaſms, with reſpect to the matter of which they conſiſt, as emollient, reſolvent, diſcutient, ſuppurative, corroborative, anodyne and antiſeptic cataplaſms. They are commonly applied hot, or lukewarm, rolled up in linen cloths, which by means of the oils which are added, preſerve heat for a conſiderable time; for which end alſo ſome, upon theſe, apply a ſwine or ox's bladder, and ſometimes on the top of all, apply an earthern tile. Some cataplaſms are prepared by boiling over a fire, others not; whence they are diſtinguiſhed into crude and boiled. Of the former, are green plants bruiſed and reduced to a pulp, or dried and reduced to a powder, which is mixed with a convenient quantity of oil or other proper liquor. Thoſe prepared by fire, are bruiſed or pounded plants boiled to a ſoftneſs, and then boiled over again to the thickneſs of pap, with a ſufficient quantity of mucilage, meal and fat, oil, butter, ointment, leaven, bread, honey, &c. In preparing cataplaſms of milk, with an intention of molliſying, it is neceſſary not to boil them too much, becauſe milk is inſpiſſated by decoction, and the thin parts of it are diſſipated. Obſerve alſo to chooſe the neweſt and richeſt milk that can be got.

CATAPULTA, in antiquity, a military engine contrived for the throwing of arrows, darts, and ſometimes ſtones upon the enemy.

Some of theſe engines were of ſuch force, that they would throw ſtones of an hundred weight. Joſephus takes notice of the ſurpriſing effects of theſe engines, and ſays, that the ſtones thrown out of them beat down the battlements, knocked off the angles of the towers, and would level a whole file of men, from one end to the other, were the phalanx never ſo deep.

The catapulta differed from the ballista, in that the latter threw ſtones only, whereas the former threw chiefly darts and javelins. See the article BALLISTA.

CATARACT, in hydrography, a precipice in the channel of a river, cauſed by rocks,

rocks, or other obſtacles, ſtopping the courſe of the ſtream, from whence the water falls with a greater noiſe and impetuoſity: ſuch are the cataracts of the Nile, the Danube, Rhine, and the famous one of Niagara in America.

CATARACT, in medicine and ſurgery, a diſorder of the humours in the eye, by which the pupilla, that ought to appear tranſparent and black, looks opake, grey, blue, brown, &c. by which viſion is variouſly impeded, or totally deſtroyed.

The ordinary and moſt common cauſe of cataracts, is from an opacity in the cryſtalline lens: it appears that it may ſometimes be cauſed by a membrane in the aqueous humours, which cauſe was the only one aſcribed to cataracts, till the preſent century.

Cataracts have been diſtinguiſhed by ſurgeons and oculiſts into various ſpecies as into recent and inveterate, incipient and confirmed, mature and immature, ſimple and complicated, immoveable and ſhaking, milky and purulent, true and ſpurious, and into curable and incurable.

There is ſcarce any diſorder, the event of which is more uncertain, than that of a cataract: medicines will generally have little or no effect, when the diſorder is confirmed, or inveterate, notwithſtanding what ſome may boaſt of their wonderful *arcana* for this purpoſe: almoſt the ſole relief is therefore had from the ſurgeon's hand and inſtruments. For the proceſs of this operation, ſee the article COUCHING *of a cataract*.

Tho' moſt people reject all methods of treating cataracts by medicines, as uſeleſs and trifling, yet there are ſome caſes in this diſorder, which ought to be recommended to the care of the phyſicians, who, by directing a proper regimen and courſe of phyſic, adapted to the patient's habit, age, and other circumſtances, may, by the aſſiſtance of nature, remove cataracts beyond expectation.

CATARO, the capital of a territory of the ſame name, in the venetian Dalmatia, about twenty-five miles ſouth-eaſt of Raguſa: eaſt longitude 19° 20′, north latitude 42° 25′.

CATARRH, in medicine, a diſtillation or defluction from the head upon the mouth and aſpera arteria, and through them upon the lungs.

The cauſe of this diſorder proceeds from the lympha or maſs of blood, moſt frequently in the winter time, as it commonly ariſes from a cold. If it is attended with a fever, as it almoſt always is, in ſome degree, it is called a catarrhous fever.

The catarrhus ſuffocativus, is a violent and ſuffocating cough, excited either by an exceſſive catarrh, or cold; by the rupture of a vomica in the lungs; by a polypus driven from the heart into the pulmonary artery; or, ſometimes, by a ſpaſmodic conſtitution of the nerves, as it happens in ſome hyſteric caſes.

Catarrhous diſorders, as well as all other feveriſh indiſpoſitions, are to be treated in a mild and gentle manner; and the patient is to be kept moderately warm, either in bed, or by means of a fire: he is to abſtain from medicines which are too hot, draſtic, and productive of commotions; as alſo from a hot regimen. The diet is to be ſpare, and the drink tepid and wholeſome: the moſt proper is excorticated barley, with ſhavings of hartſhorn, raiſins, and liquorice root.

When the efferveſcence is violent, a few grains of nitre may be advantageouſly mixed with the bezoardic powders; and emulſions muſt be plentifully drunk: when during this diſorder the fæces are indurated, and the patient coſtive, beſides water-gruel, decoctions of manna, &c. are to be drunk; and nothing is more proper than emollient clyſters.

Some diſtinguiſh catarrhs into three kinds, calling it branchus, when the humours of the head fall upon the jaws; coryza when they fall upon the noſtrils; and rheum, when they fall on the breaſt.

CATARRH *of the ſpinal marrow*, in medicine, a falling out of the marrow of the back-bone, which happens when certain lymphatic veſſels are broken.

CATARRHAL, ſomething belonging to a catarrh: thus we ſay, a catarrhal fever, a catarrhal flux, &c.

CATASTASIS, κατασασις, in poetry, the third part of the antient drama, being that wherein the intrigue, or action, ſet forth in the epitaſis, is ſupported and carried on, and heightened, till it be ripe for the unravelling in the cataſtrophe. Scaliger defines it, the full growth of the fable, while things are at a ſtand in that confuſion to which the poet has brought them.

CATASTROPHE, in dramatic poetry, the fourth and laſt part in the antient drama, or that immediately ſucceeding the cataſtaſis: or, according to others, the third only; the whole drama being divided

divided into protaſis, epitaſis, and cataſtrophe; or in the terms of Ariſtotle, prologue, epilogue, and exode.

The cataſtrophe clears up every thing, and is nothing elſe but the diſcovery or winding up of the plot. It has its peculiar place, for it ought entirely to be contained, not only in the laſt act, but in the very concluſion of it; and when the plot is finiſhed, the play ſhould be ſo too. The cataſtrophe ought to turn upon a ſingle point, or ſtart up on a ſudden.

The great art in the cataſtrophe is, that the clearing up of all difficulties may appear wonderful, and yet eaſy, ſimple, and natural.

It is a very general, but very prepoſterous, artifice of ſome writers, to ſhew the cataſtrophe in the very title of the play. Mr. Dryden thinks that a cataſtrophe reſulting from a mere change in ſentiments and reſolutions of a perſon, without any other machinery, may be ſo managed, as to be exceeding beautiful. It is a diſpute among the critics, whether the cataſtrophe ſhould always fall out favourably on the ſide of virtue, or not. The reaſons on the negative ſide ſeem the ſtrongeſt: Ariſtotle preſers a ſhocking cataſtrophe to a happy one. The cataſtrophe is either ſimple or implex; the firſt is that in which there is no change in the ſtate of the principal perſons, nor any diſcovery or unravelling, the plot being only a mere paſſage out of agitation into quiet and repoſe. In the ſecond, the principal perſons undergo a change of fortune, in the manner already defined.

CATCH, or CATCHES, in a clock, thoſe parts which lay hold of others by hooking, or catching hold of them.

CATCH-FLY, in botany, a name given to the lychnis. See the article LYCHNIS.

CATCH-LAND, ſuch land, particularly in Norfolk, which is not certainly known to what pariſh it belongs; ſo that the miniſter, who firſt ſeizes the tythes, does, by right of pre-occupation, enjoy them for that year.

CATCH-POLE, or CATCH-POLLE, a term uſed, by way of reproach, for the bailiff's-follower, or aſſiſtant. See the article BAILIFF.

Formerly it was a term of credit applied to thoſe now called ſerjeants of the mace, bailiffs, &c.

CATCH-WORD, among printers, that placed at the bottom of each page; being always the firſt word of the following page.

CATECHISM is defined in the liturgy of the church of England, an inſtitution to be learned of every perſon, before he be brought to be confirmed by the biſhop. The catechiſms of the primitive church, uſually began with the doctrine of repentance and remiſſion of ſins, the neceſſity of good works, and the nature and uſe of baptiſm; then followed the explanation of the ſeveral articles of the creed, to which ſome added the doctrine of the immortality of the ſoul, and an account of the canonical books of ſcripture.

The catechiſm of the church of England, is drawn up after the primitive manner, by way of queſtion and anſwer: originally it conſiſted of no more than a repetition of the baptiſmal vow, the creed, and the Lord's prayer; but king James I. ordered the biſhops to add to it a ſhort and plain explication of the ſacraments.

The time appointed for catechizing, are ſundays and holidays. Every parſon, vicar, or curate, are enjoined, upon every ſunday and holiday, to teach and inſtruct the youth, and ignorant perſons of his pariſh, in the catechiſm, ſet forth in the book of common-prayer; and that under the penalty of a ſharp reproof for the firſt omiſſion, ſuſpenſion for the ſecond, and excommunication for the third.

CATECHIST, an officer in the primitive chriſtian church, whoſe buſineſs it was to inſtruct the catechumens in the firſt principles of religion, and thereby prepare them for the reception of baptiſm.

This office might be performed by an eccleſiaſtic of any order, and it was ſometimes done by the biſhop himſelf.

CATECHU, in the materia medica, improperly called *terra japonica* in the ſhops, is a concreted vegetable juice, partly of the gumy, partly of the reſinous kind.

The common catechu of the ſhops, is brought to us in large, flat cakes, from Malabar, Surat, Pegu, and other parts in the Eaſt-Indies.

It is prepared from the parts of ſeveral different trees of the ſame aſtringent virtue, and is affirmed by ſome to be the lycium of the antients. The catechu is a very valuable aſtringent. It ſtrengthens the ſtomach, aſſiſts digeſtion, and ſtops fluxes, diarrhœas, and even dyſenteries; as alſo hæmorrhages of all kinds, and particularly profluvia of the menſes. Its doſe is from five or ſix grains to a ſcruple. It may be given in almoſt any form.

CATECHUMEN, a candidate for baptiſm,

tiſm, or one who prepares himſelf for the receiving thereof.

The catechumens, in church-hiſtory, were the loweſt order of chriſtians in the primitive church. They had ſome title to the common name of chriſtian, being a degree above pagans and heretics, tho' not conſummated by baptiſm. They were admitted to the ſtate of catechumens, by the impoſition of hands, and the ſign of the croſs. The children of believing parents were admitted catechumens, as ſoon as ever they were capable of inſtruction: but at what age thoſe of heathen parents might be admitted, is not ſo clear. As to the time of their continuance in this ſtate, there were no general rules fixed about it; but the practice varied according to the difference of times and places, and the readineſs and proficiency of the catechumens themſelves.

There were four orders or degrees of catechumens; the firſt were thoſe inſtructed privately without the church, and kept at a diſtance, for ſome time, from the privilege of entering the church, to make them the more eager and deſirous of it. The next degree were the *audientes*, ſo called from their being admitted to hear ſermons and the ſcriptures read in the church, but were not allowed to partake of the prayers. The third ſort of catechumens were the *genu flectentes*, ſo called becauſe they receive impoſition of hands kneeling. The fourth order was the *competentes & electi*, denoting the immediate candidates for baptiſm, or ſuch as were appointed to be baptized the next approaching feſtival, before which ſtrict examination was made into their proficiency under the ſeveral ſtages of catechetical exerciſes.

After examination, they were exerciſed for twenty days together, and were obliged to faſting and confeſſion: ſome days before baptiſm they went veiled, and it was cuſtomary to touch their ears, ſaying *ephata*, i. e. be opened; as alſo, to anoint their eyes with clay; both ceremonies being in imitation of our Saviour's practice, and intended to ſhadow out to the catechumens their condition both before and after their admiſſion into the chriſtian church.

CATEGATE, SCAGERAC-SEA, the paſſage from the german ocean to the Sound, or the entrance into the Baltic ſea, between Sweden and Denmark.

CATEGOREMA, among logicians, denotes much the ſame with predicament or category. See the article CATEGORY.

CATEGORICAL, whatever partakes of the nature of a category. Thus, a categorical order, requires the ſubſtance to go before the accident. And categorical anſwers are pertinent and preciſe replies to the facts or objections propoſed. See the article CATEGORY.

CATEGORY, κατηγορια, in logic, a ſeries or order of all the predicates or attributes contained under any genus.

The ſchool philoſophers diſtribute all the objects of our thoughts and ideas into certain *genera* or claſſes, not ſo much, ſay they, to learn what they do not know, as to communicate a diſtinct notion of what they do know; and theſe claſſes the Greeks called categories, and the Latins predicaments.

Ariſtotle made ten categories, *viz.* ſubſtance, quantity, quality, relation, action, paſſion, time, place, ſituation, and habit, which are uſually expreſſed by the following technical diſtich.

Arbor, ſex, ſervos, ardore, refrigerat, uſtos,
Ruri, cras, ſtabo, nec tunicatus ero.

But as the ſeries of categories is entirely arbitrary, ſome philoſophers think all nature may be better conſidered under theſe ſeven things, ſpirit, matter, quantity, ſubſtance, figure, motion, and reſt: and others make but two categories, ſubſtance and accident.

CATENA, in a general ſenſe, denotes a chain. See the article CHAIN.

CATENA, in anatomy, a name uſed by ſome for the muſcle, more commonly called *tibialis anticus*. See TIBIALIS.

CATENA PATRUM, in matters of literature, a book exhibiting the ſentiments of the antient chriſtian fathers, with reſpect to all of moſt doctrines.

Theſe catenæ are very numerous, ſome being compiled with judgment, fidelity, and accuracy; and others with juſt the reverſe qualities.

CATENARIA, in the higher geometry, the name of a curve line formed by a rope hanging freely from two points of ſuſpenſion, whether the points be horizontal or not. The nature of this curve was ſought after in Galileo's time, but not diſcovered till the year 1690, when Mr. Bernoulli publiſhed it as a problem. Dr. Gregory, in 1697, publiſhed a method of inveſtigation of the properties formerly diſcovered by Mr. Bernoulli and Mr. Leibnitz, together

gether with ſome new properties of this curve. From him we take the following method of finding the general property of the catenaria. 1. Suppoſe a line heavy and flexible, the two extremes of which F and D (plate XXXVIII. fig. 5.) are firmly fixed in thoſe points; by its weight it is bent into a certain curve F A D, which is called the catenaria.

2. Let B D and *b c* be parallel to the horizon, A B perpendicular to B D, and D *c* parallel to A B, and the points B *b* infinitely near to each other. From the laws of mechanics, any three powers in equilibrio, are to one another as the lines parallel to the lines of their direction, (or inclined in any given angle) and terminated by their mutual concourſes: hence if D *d* expreſs the abſolute gravity of the particle D *d* (as it will if we allow the chain to be every way uniform) then D *c* will expreſs that part of the gravity that acts perpendicularly upon D *d*; and by the means of which this particle endeavours to reduce itſelf to a vertical poſition: ſo that if this lineola *d c* be conſtant, the perpendicular action of gravity upon the parts of the chain, will be conſtant too, and may therefore be expreſſed by any given right line.

Further, the lineola D *c* will expreſs the force which acts againſt that conatus of the particle D *d*, by which it endeavours to reſtore itſelf in a poſition perpendicular to the horizon, and hinders it from doing ſo. This force proceeds from the ponderous line D A drawing according to the direction D *d*; and is, cæteris paribus, proportional to the line D A which is the cauſe of it. Suppoſing the curve F A D, therefore, as before, whoſe vertex is A, axis A B, ordinate B D, fluxion of the axis D C = B *b*, fluxion of the ordinate *d c*, the relation of theſe two fluxions is thus, *viz*, *d c* : D *d* : : *a* : D A curve, which is the fundamental property of the curve, and may be thus expreſſed (putting A B = *x* and B D = *y* and A D = *c*)

$$\dot{y} = \frac{a\dot{x}}{c}.$$

CATERGI, the name of the public carriers in the grand ſignior's dominions. In Europe, the merchant or traveller gives earneſt to the carrier, but the catergi in Turkey gives earneſt to the merchant and others, as a ſecurity that they will certainly carry their goods, or not ſet out with them.

CATERLAGH, a town of Ireland, in the county of Caterlagh, and province of Leinſter, ſituated on the river Barrow, about ſixteen miles north-eaſt of Kilkenny: weſt long. 7°, north lat. 52° 45′.

CATERPILLAR, *eruca*, in zoology, the name of the butterfly-claſs of inſects, in their reptile or worm-ſtate.

It is well known, that all winged inſects paſs through a reptile ſtate, before they arrive at perfection: this great change from a worm to a fly, or butterfly, was formerly eſteemed a real metamorphoſis of one animal to another; but later diſcoveries have put it beyond all doubt, that the embryo butterfly, with all the lineaments of its parent, is contained within the external caſes or coverings, of the caterpillar. When the included animal has acquired a ſufficient degree of ſtrength, theſe coverings are thrown off, and it appears in its genuine or moſt perfect form of a fly, or butterfly. See the articles FLY and BUTTERFLY.

It is neceſſary, however, before the animal can get rid of theſe coverings, that it paſs through a ſtate of reſt, called by naturaliſts the nymph or chryſalis-ſtate. See the articles NYMPH and CHRYSALIS. Whoever deſires to have a more full account of theſe animals in their reptile and chryſalis-ſtate, may conſult the ſecond volume of Reaumur's Hiſtory of inſects; and for a view of three ſeveral ſpecies of caterpillars. See plate XXXVIII. fig. 6.

CATERPILLAR-EATERS, ſmall worms bred from the eggs of certain flies, lodged in bodies of larger caterpillars.

CATERPILLAR-PLANT, in botany, the name by which ſome call the *ſcorpioides*, or *ſcorpiurus* of botaniſts. See the article SCORPIURUS.

CATERPILLAR SHELL, the engliſh name of the verrucoſe *turbo*, with a broad and depreſſed mouth. See TURBO.

CATESBÆA, in botany, a genus of the tetrandria-monogynia claſs of plants, the flower of which is monopetalous, and of a funnel-form; the fruit is an oval crowned berry, with one cell, containing ſeveral angulated ſeeds.

CATHÆRETICS, in pharmacy, the ſame with ſarcophagous medicines, or thoſe of a cauſtic nature, ſerving to eat off proud fleſh. See the articles SARCOPHAGOUS and CAUSTICS.

CATHARINE, or *Knights of St.* CATHARINE, a military order, inſtituted in 1063, for the ſecurity of travellers who came to viſit the tomb of this ſaint on Mount Sinai. The knights received, as a badge

of their dignity, a broken wheel with a sword stained with blood. They took vows to guard the body of this saint, to secure the roads for pilgrims, to defend the rights of the church, to obey their superiors in all things, and follow the rule of St. Basil.

The *Fraternity of St.* CATHARINE *of Sienna*, is a sort of religious society instituted in that city, in honour, and under the patronage, of St. Catharine of Sienna, a saint famous for her revelations, and for her amours and marriage with Jesus Christ: whose wedding ring, given her by her divine spouse, is still preserved as an unexceptionable relick.

The fraternity of St. Catharine gives portions yearly to a certain number of maids left unprovided for, who, on condition hereof, accept of husbands. In order to match them, a fine procession is made of the girls, who are to be thus endowed; and during the march, the young men, who are willing to be suitors, present them an handkerchief. If the maid return it, or she received it, it imports that the offer is rejected. If she tie it in a knot, the bargain is made, and the parents themselves cannot hinder it; by reason such matches are supposed to come from heaven, and to be made by St. Catharine herself. The same fraternity has also a privilege of redeeming annually two criminals condemned for murder; and it lets at liberty the same number of debtors, by paying their debts.

CATHARTICS, in medicine, remedies which promote evacuation by stool. They are the same with what are commonly called purgatives.

Cathartics may be divided into two classes, 1. The eccoprotic or milder; 2. The drastic, or rougher.

They are likewise divided according as they are supposed to purge bile, pituita, melancholly, and serosities, into cholagogues, phlegmagogues, melanagogues, and hydragogues. See the article CHOLAGOGUES, &c.

Cathartics operate by vellicating and irritating the fibres and membranes of the stomach and intestines. As the peristaltic motion of the guts is such as propels continually their contents, from the pylorus down to the rectum, every irritation either quickens that motion, in its natural order, or occasions some little inversion of it; in both, what but slightly adheres to the coats, or inner membranes, will be loosened and shook off, and carried forwards with the contents; and being also more agitated, will be rendered more fluid; hence it appears how a cathartic hastens and increases the discharge by stools. But the same manner of operation carries its effects much farther, in proportion to the force of the stimulus; for where it is great, the appendices of the bowels, and even all the viscera in the abdomen, will, by a consent of parts, that is, a communication of nerves, be pulled or twitched, so as to affect their respective juices, in the same manner as the intestines themselves affect their contents. The consequences, therefore, must be, that a great part will be drained back into the intestines, and make a part of what they discharge. Another way of promoting the discharges by stool, from fusions, is to mix such particles with them as prevent their running into viscid colesions, and, by degrees, divide and break them when in contact; whence they are rendered fitter to run off by the most convenient outlets.

CATHEDRA, among ecclesiastical writers, denotes a bishop's see, or throne. Hence,

Ex CATHEDRA, a phrase much used among the clergy of the romish church, in relation to the solemn decrees of the pope, delivered with all possible formality, he being deemed infallible then only when he speaks, in this manner, *ex cathedrâ*: tho' others, particularly of the gallican church, allow only of his infallibility when he presides, or issues decrees at the head of a general council; and others, when he speaks agreeably to the scriptures and truth of things: but these last quite overthrow it, every other man being, in this sense, equally infallible with the pope.

CATHEDRAL, a church wherein is a bishop's see or seat.

A cathedral was originally different from what it is now, the christians, till the time of Constantine, having no liberty to build any temple. By their churches they only meant their assemblies; and by their cathedrals, nothing more than consistories.

By a canon of the fifth council of Carthage, it is ordered, that every bishop shall have his residence at his principal, or cathedral church, which he shall not leave, to betake himself to any other church in his diocese; nor continue upon his private concerns to the neglect of his cure, and hindrance of his frequent-

ing the cathedral church. Yet Juſtinian, in Novels vi. cap. 2. ſays, "No biſhop "ſhall be abſent from his church above "a whole year, unleſs he has the em- "peror's command for it." Which im- plies that a biſhop might be abſent from his cathedral a year in ordinary caſes, and more in extraordinary.

CATHERINE, or CATHARINE. See the article CATHARINE.

CATHETA, or CATHETUS. See the article CATHETUS.

CATHETER, in ſurgery, a fiſtulous inſtrument, uſually made of ſilver, to be introduced into the bladder, in order to ſearch for the ſtone, or diſcharge the urine when ſuppreſſed.

The catheter may be introduced with ſomuch more eaſe in women than in men, as the urethra in the firſt is much ſhorter, wider, and in a ſtraighter courſe. In both ſexes, however, this inſtrument cannot be eaſily paſſed, but by one that is previouſly acquainted with the anatomical ſtructure of the parts.

To prevent repeating the operation of paſſing the catheter when the retention of urine will follow in a ſhort time, modern ſurgeons have, inſtead of the common or rigid catheter, provided a flexible catheter, made of flatted ſilver, convoluted in a particular manner, as in plate XXXVIII. fig. 7. to give a continual paſſage to the urine.

M. Le Cat, ſurgeon at Rouen has likewiſe invented a new ſteel grooved catheter, for performing lithotomy in a manner, akin to Celſus's, or upon the gripe, two views of which are exhibited in the above mentioned plate and figure; both being one third of the ſize which the inſtrument ought to be made of.

CATHETOLIPES, in natural hiſtory, an order of octohaedral ſelenitæ, with perpendicular plates and obtuſe angles. It is compoſed of two horizontal planes, or a top and bottom, and four trapezia, two on each ſide, divided by an obliquely-placed and ſcarcely diſtinguiſhable ridge, it riſing very little above the ſurface, and almoſt leaving the ſides in ſingle inſtead of double trapezia. It is ſhort and thick in proportion to its breadth, and is found for the moſt part, of about an inch in length, an inch in breadth, and not much leſs in thickneſs: its ends are truncated, a little ſlanting, and leave two ſmooth gloſſy planes. It conſiſts of a vaſt number of tolerably thin flakes, laid evenly and regularly in a tranſverſe order, and perpendicular to the length of the maſs, and theſe are each compoſed of a conſiderable number of moderately large filaments; the whole is fiſſile, according to the direction of the flakes, though not according to the direction of the fibres that compoſe them, without great force. The flakes are of an opake whitiſh hue in the maſs, but appear more pellucid when ſeparated. The whole is moderately heavy, and will neither give fire with ſteel, nor ferment with aqua fortis. It is found in the Staffordſhire clay-pits, in the loam-pits at Hedgerly, and near Oxford.

CATHETUS, in geometry, a line or radius falling perpendicularly on another line or ſurface: thus the catheti of a right angled triangle are the two ſides that include the right angle.

CATHETUS *of incidence*, in catoptrics, a right line drawn from a point of the object, perpendicular to the reflecting line.

CATHETUS *of reflection, or of the eye*, a right line drawn from the eye, perpendicular to the reflecting line.

CATHETUS *of obliquation*, a right line drawn perpendicular to the ſpeculum, in the point of incidence or reflection.

CATHETUS, in architecture, a perpendicular line, ſuppoſed to paſs through the middle of a cylindrical body, as a baluſter, column, &c.

In the ionic capital, the cathetus is a perpendicular line paſſing through the middle of the eye of the volute. See AXIS.

CATHNESS, the moſt northerly county of Scotland, having the caledonian ocean on the north, eaſt, and ſouth-eaſt, and the ſhire of Sutherland on the ſouth and weſt. Its capital is Wick.

CATHOLIC, in a general ſenſe, denotes any thing that is univerſal or general.

CATHOLIC CHURCH. The riſe of hereſies induced the primitive chriſtian church to aſſume to itſelf the appellation of catholic, being a characteriſtic to diſtinguiſh it from all ſects, who, though they had party-names, ſometimes ſheltered themſelves under the name of chriſtians.

The romiſh church diſtinguiſhes itſelf now by the name of catholic, in oppoſition to all thoſe who have ſeparated from her communion, and whom ſhe conſiders as only heretics and ſchiſmatics, and herſelf only as the true and chriſtian church. In the ſtrict ſenſe of the word, there is no catholic church in being, that is, no univerſal chriſtian communion.

CATHOLIC KING, a title which hath been hereditary to the kings of Spain, ever ſince

ince Alphonſus, who having gained ſeveral victories over the Sarracens, and re-eſtabliſhed the chriſtian faith in Spain, was honoured with the title of catholic. Some ſay it was in the time of Ferdinand and Iſabella.

CATHOLIC FURNACE is a little furnace ſo contrived as to be fit for all kinds of operations which do not require an intenſe fire.

CATHOLICON, in pharmacy, a kind of ſoft purgatory electuary, ſo called, as being ſuppoſed an univerſal purger of all humours.

CATKIN, or KATKIN, a cluſter of flowers affixed to an axis; being the ſame with an amentaceous flower. See the article AMENTACEOUS.

CATLIN, among ſurgeons, a knife for cutting off corrupted parts of the body.

CATOCH, the name of a cape, or promontory, of the province of Jucatan, in Mexico: weſt longitude 89°, and north latitude 21° 30′.

CATOCHE, or CATOCHUS, in medicine, a diſeaſe, by which the patient is rendered, in an inſtant, as immoveable as a ſtatue, without either ſenſe or motion, and continues in the ſame poſture he was in at the moment he was ſeized. The proximate cauſe of this diſeaſe is the immobility of the common ſenſory, from the time of the firſt attack, and therefore is an abſolute reſt of the blood in the brain, of the glands of the brain, and of all its emiſſories. This diſeaſe is generally preceded by obſtinate intermitting fevers; by a dry, lean, melancholy temperament of body; by a retention of the menſes and hæmorrhoids; by ſudden frights; by a profound, conſtant, and fixed meditation on one ſubject. It is often cured by exciting a copious hæmorrhage from the noſe; but the particular method of cure is various, according to the different cauſes: the patient ſhould be excited with things that greatly ſtrike the ſenſes, ſuch as light, noiſe, ſtimulating things, volatile ſalts, pain, friction, continual agitations, by promoting the menſtrual flux, by ſternutatories, and emetics, by bliſters, by iſſues, by ſetons, by a moiſtening diet. It ſeldom changes to any other diſeaſe, and ſometimes it has been ſucceeded by an epilepſy, convulſions, madneſs, or an atrophy, which have ended in death.

CATOCYSTI, in the hiſtory of ſhell-fiſh, an order or diviſion of the ſea-hedge-hogs, or *echini marini* of authors, with the aperture of the anus in the baſe of the ſhell.

CATODON, in ichthyology, a genus of fiſhes, of the order of the *plagiuri*, the characters of which are theſe: they have no teeth in the upper jaw, nor any fin on the back.

Of this genus there are two ſpecies; 1. The ſperma-ceti whale, called by authors *cete*, *cetus dentatus*, and *balæna major*, with the above-mentioned characters, and the fiſtula in the neck. 2. The catodon with the fiſtula in the ſnout, called by authors *balæna minor*.

CATOPSIS, in medicine, the ſame with *myopia*. See the article MYOPIA.

CATOPTRICS, that part of optics that treats of reflex viſion, and explains the laws and properties of reflection, chiefly founded upon this truth, that the angle of reflection is always equal to the angle of incidence; and from thence deducing the magnitudes, ſhapes, and ſituations of the appearances of objects ſeen by the reflection of poliſhed ſurfaces, and particularly plane, ſpherical, conical and cylindrical ones: but this doctrine being a part of optics, ſee the article OPTICS.

CATOPTRIC CISTULA, a machine, or apparatus, whereby ſmall bodies are repreſented extremely large, and near ones extremely wide, and diffuſed through a vaſt ſpace, and other agreeable phænomena, by means of mirrors, diſpoſed by the laws of catoptrics, in the concavity of a kind of cheſt.

Of theſe there are various kinds accommodated to the various intentions of the artificer; ſome multiply objects, ſome deform them, ſome magnify, &c.

CATOPTRIC DIAL, a dial that exhibits objects by reflected rays. See the article *Reflecting* DIAL.

CATOPTRIC, or CATA-DIOPTRIC TELESCOPE, a teleſcope that exhibits objects by reflection. See the article *Cata-dioptric*, or *Reflecting* TELESCOPE.

CATOPTROMANCY, a kind of divination among the antients, conſiſting in the application of a mirror. Pauſanias ſays, it was uſed by the Achaians, where thoſe who were ſick, let down a mirror, faſtened by a thread into a fountain, before the temple of Ceres; then looking in the glaſs, if they ſaw a ghaſtly face they took it as a ſure ſign of death; on the contrary, if the face appear freſh and healthy, it was a ſign of recovery. Sometimes it was performed by a veſſel of

water, the middle of which was called γαστηρ, whence the divination was called gastromancy. See GASTROMANCY.

CATTIVO, in music, as cattivo tempo, a certain part of the measure wherein it is not proper to perform certain things as to end a cadence, or place a long syllable. It properly signifies what we call the unaccented part of the bar, and is the second and last note in common time, and the middle one of every three in triple.

CATTLE, a collective name importing all quadrupeds, used either in tilling the ground, or for the food of man. Under cattle, some include all quadrupeds which associate, or go in herds, as sheep, oxen, horses, hogs, &c. Others define cattle to be all tame animals which graze. Cattle is sometimes divided into great, comprehending oxen, bulls, cows, calves, horses, &c. and small, including sheep, lambs, goats, and the like.

Black CATTLE, the same with the ox-kind. See the article BOS.

Stealing of cattle is felony without benefit of clergy, and that to the accomplices as well as the principals, by stat. 14, 15, and 16 Geo. II. where, under cattle are comprehended a bull, cow, ox, steer, bullock, heifer, calf, sheep, and lamb; and no other quadrupeds.

CATUS-PARDUS, or CATUS-MONTANUS, in zoology. See the article CAT *of the mountain*.

CATZENELLIBOGEN, a city of Hesse, situated upon the upper Rhine, in Germany, about sixteen miles north of Mentz: east longitude 7° 40′, north lat. 50° 20′. It is the capital of a county of the same name.

CAVA, or VENA CAVA, in anatomy, a vein arising with a large sinus from the right auricle of the heart. It there sends out a vein to the heart itself, called the coronary vein, and is divided into two trunks, a superior and an inferior: from the superior trunk of the vena cava there arise the following veins, the azygos, the bronchial, the mediastinal, the superior diaphragmatic, and the subclavians: the inferior trunk of the vena cava is remarkable for the valves, and from this arise the diaphragmatic, or inferior phrenic veins, the renal veins, the right spermatic, the sacra, and the iliacs. See VEIN, and each of these under its proper head.

CAVA, in geography, a town of Italy, in the kingdom of Naples, about four miles from Salerno.

CAVALCADE, a pompous procession of horsemen, equipages, &c. by way of parade to grace a triumph, public entry, or the like. See the article CARROUSAL.

CAVALIER, in fortification, an elevation of earth, of different shapes, situated ordinarily in the gorge of a bastion, bordered with a parapet, and cut into more or less embrasures, according to the capacity of the cavalier.

Cavaliers are a double defence for the faces of the opposite bastion: they defend the ditch, break the besiegers galleries, command the traverses in dry moats, scowr the sailliant angle of the counterscarpe where the besiegers have their counter-batteries, and infilade the enemies trenches, or oblige them to multiply their parallels: they are likewise very serviceable in defending the breach, and the retrenchments of the besieged, and can very much incommode the entrenchments which the enemy make, being lodged in the bastion.

CAVALIER, in the manege, one that understands horses, and is practised in the art of riding them.

CAVALRY, a body of soldiers that charge on horseback, and may properly be called the right arm of the army: they are of great service in disturbing the enemy by their frequent excursions, in intercepting convoys, and destroying the country.

The cavalry is divided into squadrons, and encamp on the wings of the army. Too great a number of cavalry may prove prejudicial to an army; for as they consume a great deal of forage, they may oblige a general to decamp from an advantageous post.

CAVAN, the capital of a county of the same name, in the province of Ulster, in Ireland, situated about sixty miles north west of Dublin: west longitude 7° 35′, north latitude 54°.

CAVAZION, or CAVASION, in architecture, denotes the hollow trench made for laying the foundation of a building, which, according to Palladio, ought to be one sixth part of the height of the whole building.

CAUCALIS, in botany, a genus of the pentandria-digynia class of plants, the universal flower of which is difform and radiated; the proper flower of the disk is male, small, and composed of five inflexo-cordated equal petals; the proper flower of the radius is hermaphrodite and composed of five inflexo-cordated unequal petals,

fails, the exterior one being larger than the reſt and bifid: the fruit is of an oblato-oblong figure, ſtriated longitudinally, with rigid ſcabrous briſtles: the ſeeds are two, oblong, convex on one ſide and armed with prickles in order of the ſtriæ, and plane on the other ſide. See plate XXXVIII. fig. 9.

CAUCASUS, a vaſt ridge of mountains, running from the leſſer Aſia through the north of Perſia to the Eaſt Indies; theſe acquire different names in the ſeveral countries through which they paſs.

CAUDA, in a general ſenſe, denotes the tail of an animal. See the article TAIL.

CAUDA, among ſome anatomiſts, denotes the clitoris of the female pudendum. See the article CLITORIS.

CAUDA DRACONIS, the DRAGON'S-TAIL, in aſtronomy, the name of the moon's deſcending node. See the article NODE.

CAUDA LEONIS, in aſtronomy, a ſtar of the firſt magnitude in the tail of the conſtellation leo. See the article LEO.

CAUDEBEC, a city of Normandy, in France, ſituated on the north ſide of the river Seine, about ſixteen miles weſt of Rouen: eaſt longitude 45′, and north latitude 49° 32′.

CAVE, a ſubterraneous hollow place of a certain extent.

Some authors diſtinguiſh between a cave and a cavern, making the firſt the effect of art, and the latter of nature.

The caves in Wiltſhire, between Luckington and Great-Badmington, nine in number, of a row, of ſeveral dimenſions, the leaſt four feet broad, and nine or ten feet long, are credibly ſuppoſed to be the tombs of ſome heroic men among the antient Romans, Saxons, and Danes, becauſe ſpurs, and pieces of armour have been dug out of them.

CAVEAR, CAVEER, or CAVIARY, the ſpawn, or hard roes of ſturgeon, made into ſmall cakes, an inch thick, and of an hand's breadth, ſalted, and dried in the ſun. This ſort of food is in great repute throughout Muſcovy, becauſe of their three lents, which they keep with a ſuperſtitious exactneſs; wherefore the Italians ſettled at Moſcow, drive a very great trade in this commodity throughout that empire, becauſe there is a prodigious quantity of ſturgeon taken at the mouth of the Wolga, and of the other rivers which fall into the Caſpian ſea. There is a pretty large quantity of this commodity conſumed in Italy, and they are very well acquainted with it in France and England, where it is reckoned no deſpicable diſh. The French and Italians get the caviar from Archangel, but they ſeldom get it at the firſt hand, for they commonly buy it of the Engliſh and Dutch.

CAVEAT, in law, a kind of proceſs in the ſpiritual courts, to ſtop the proving of a will, the granting letters of adminiſtration, &c. to the prejudice of another. See the article PROBATE.

It is alſo uſed to ſtop the inſtitution of a clerk to a benefice.

CAVEATING, in fencing, is the ſhifting the ſword from one ſide of that of your adverſary to the other.

Caveating is a motion whereby a man brings in an inſtant his ſword which was preſented on any ſide of his adverſary's, generally beneath his hilt, to the oppoſite ſide; either from within, to without, or *vice verſa*; or from having its point high, to be low, or the reverſe; and either on the ſame ſide it is preſented in, or the oppoſite ſide.

Caveating is ſo neceſſary a motion in fencing, that without it, there could be ſcarce any offenſive part, or purſuit. It is withal ſo eaſily performed againſt the ordinary tierce and quart guards, that it gives a conſtant opportunity to make a variety of quick ſubtle feints againſt them, which by reaſon of the ſmall croſs made by the weapons on theſe guards, makes the purſuit very eaſy, and the parade or defence very difficult.

The conſideration of this put Sir William Hope on the ſearch of a new method or guard, which, by reaſon of its greater croſs on the adverſary's ſword, renders the caveating, and making feints more ſlow, and conſequently the parade more certain.

CAVEDO, in commerce, a Portugueſe long meaſure, equal to 27 $\frac{333}{1000}$ engliſh inches.

CAVERN, denotes much the ſame with grotto. See the article GROTTO.

CAVERNOSE, among anatomiſts, an appellation given to ſeveral parts of the body, on account of their ſpongy ſtructure; thus the cavernoſa corpora of the penis are two ſpongy bodies, made up of a number of ſmall caverns or cells. Theſe are the two bodies which conſtitute the penis; they ariſe diſtinct and ſeparate on each ſide of the oſſa pubis, as it were from peculiar thalami: after this they join, and, in that original ſtate, are carried

ſied into the glans. If any liquid matter be impelled into theſe, or if they be inflated, the penis becomes rigid. Theſe two bodies are alſo termed corpora ſpongioſa.

CAVESON, or CAVEZON. See the article CAVEZON.

CAVETTO, in architecture, a hollow member, or round concave moulding, containing a quadrant of a circle, and having a quite contrary effect to that of a quarter-round: it is uſed as an ornament in cornices.

Mr. Felibien takes notice, that workmen confound the cavetto with a ſcotia, but improperly, the cavetto being in fact only half a ſcotia. See the article SCOTIA.

CAVEZON, in the manege, a ſort of noſe-band, either of iron, leather, or wood, ſometimes flat, and at other times hollow or twiſted, clapt upon the noſe of a horſe, to wring it, and ſo forward the ſuppling and breaking of the horſe.

An iron-cavezon is a ſemicircle or band of iron, conſiſting of two or three pieces joined by hinges, and mounted with a head-ſtall, a throat-band, and two ſtraps or reins with three rings; one rein paſſes through the middle ring, when we mean to make a horſe walk round a pillar; through the two ſide-rings we paſs the two reins, which the rider holds in his hand, or makes faſt to the ſaddle, in order to keep the horſe's head in ſubjection, &c.

CAVILLON, a town of Provence in France, ſituated on the river Durance, about fifteen miles ſouth of Avignon: eaſt longitude 5°, and north latitude 43° 50′.

It is a biſhop's ſee, and ſubject to the pope.

CAVIN, in the military art, a natural hollow, fit to lodge a body of troops: if there happen to be any near a place beſieged, it is of great uſe to the beſiegers; for by the help of ſuch a place they can open the trenches, make places of arms, or keep guards of horſe, without being in danger of the enemies ſhot.

CAVITY, in a general ſenſe, denotes any hollow: and hence anatomiſts have divided the body into three cavities or venters, and the limbs; the cavities are the head, the thorax, and the abdomen. See the article ABDOMEN, &c.

The cavities of the bones, Heiſter obſerves, are of two kinds, thoſe of the articulations, and thoſe anſwering other purpoſes, and called cells, caverns, *foramina* or apertures, *foſſæ* or deep channels, and *ſulci* or ſhallow ones.

CAUK, or CAWK, a term uſed among miners, for a coarſe ſparry ſtone, of a white colour, found in the lead-mines. See the article SPAR.

CAULKING, or CAULKING *of a ſhip*, is driving oakum, or the like, into all the ſeams of the planks of a ſhip, to prevent leaking and keep out the water.

CAULKING-IRONS, are iron chiſſels for that purpoſe.

Some of theſe irons are broad, ſome round, and others grooved.

After the ſeams are ſtopped with oakum, it is done over with a mixture of tallow, pitch, and tar, as low as the ſhip draws water.

CAULKING-TIME, in falconry, a hawk's treading time.

CAUL, among miners, a reddiſh pink-coloured ſtone, found in the tin-mines.

CAUL, in anatomy, a membranaceous part of the abdomen, covering the greateſt part of the guts, uſually furniſhed with a large quantity of fat, placed under the peritonæum, and immediately over the inteſtines, called by ſome authors rete, or reticulum, from the number of holes appearing in it, when raiſed, and giving it the reſemblance of a net; but it is moſt frequently called omentum. See the article OMENTUM.

CAUL is alſo a little membrane, found on ſome children, encompaſſing the head, when born.

Some take this to be only a fragment of the membranes of the fœtus, which generally break at the birth of the child.

CAULICOLES, or CAULICOLI, are eight leſſer branches or ſtalks, in the corinthian capital, ſpringing out from four greater or principal cauls, or ſtalks.

The eight volutes of this order are ſuſtained by four cauls, or primary branches, of leaves, and from which theſe cauliculi or leſſer foliages do ariſe.

CAULIFEROUS, an appellation given to ſuch plants as have a perfect caulis or ſtem. See the article CAULIS.

CAULIFLOWERS, in gardening, a much eſteemed ſpecies of *braſſica*, or cabbage. See the article BRASSICA.

Cauliflowers have of late years been ſo much improved in England, as to exceed in goodneſs and magnitude any produced in moſt parts of Europe, and, by the ſkill of the gardener, are continued for ſeveral months together, but the moſt com-

common ſeaſon for them is in May, June, and July.

In order to have very early cauliflowers, we ſhould make choice of a good rich ſpot of ground, that is well defended from the north, eaſt, and weſt winds; with hedges, pales, or walls: this ground ſhould be well trenched, burying therein a good quantity of rotten dung; the ground ſhould then be levelled; and if it be naturally a wet ſoil, you ſhould raiſe it up in beds, about two feet and a half or three feet broad, and four inches above the level of the ground. In planting your cauliflowers you ſhould allow about two feet ſix inches diſtance from glaſs to glaſs in the rows, always putting two good plants under each glaſs, which may be at about four inches from each other; and if you deſign them for a full crop, they may be three feet and a half row from row: but if you intend to make ridges for cucumbers or melons between the rows of the cauliflowers, as is generally practiſed by the gardeners near London, you muſt then make the rows eight feet aſunder.

CAULINE, in a general ſenſe, denotes any thing belonging to the caulis or ſtalk of plants. See the article CAULIS.

CAULINE LEAF, among botaniſts, that growing from the ſtalk of a plant.

CAULIS, among botaniſts, denotes the ſtalk of herbaceous plants: this, in trees, is called *caudex*, or trunk; and, in graſſes, *culmus*, or ſtem.

CAUSA MATRIMONII PRÆLOCUTI, in common law, a writ that lies where a woman gives land to a man in fee, to the intent he ſhall marry her, and he refuſes to do it in a reaſonable time, being thereunto required by the woman: and in ſuch caſe, for not performing the condition, the entry of the woman into the lands again, has been adjudged lawful.

The huſband and wife may ſue this writ againſt another, who ought to have married her.

CAUSA NOBIS SIGNIFICES, in law, a writ directed to the mayor of a town, &c. who being by the king's writ commanded to make ſeiſin of lands to the king's grantee, delays ſo doing. This writ requires him to ſhew cauſe why he makes delay.

CAUSALTY, among metaphyſicians, the action or power of a cauſe in producing its effect.

It is a diſpute among the ſchool-philoſophers, whether, and how, the cauſalty is diſtinguiſhed from the cauſe and the effect? ſome hold it a mode or modal entity, ſuperadded to the cauſe, &c. others contend for its being the cauſe itſelf. See the article CAUSE.

CAUSALTY, among miners, denotes the lighter, ſulphureous, earthy parts of ores, carried off in the operation of waſhing.

This, in the mines, they throw in heaps upon banks, which, in ſix or ſeven years, they find it worth their while to work over again. See ORE and WASHING.

CAUSE, *cauſa*, that from whence any thing proceeds, or by virtue of which any thing is done: it ſtands oppoſed to effect.

We get the ideas of cauſe and effect, ſays Mr. Locke, from our obſervation of the viciſſitude of things, while we perceive ſome qualities or ſubſtances begin to exiſt, and that they receive their exiſtence from the due application and operation of other beings. That which produces, is the cauſe, and that which is produced, the effect: thus, fluidity in wax is the effect of a certain degree of heat, which we obſerve to be conſtantly produced by the application of ſuch heat.

Firſt CAUSE, that which acts of itſelf, and of its own proper power or virtue: God is the only firſt cauſe in this ſenſe.

Second CAUSES are thoſe which derive the power and faculty of action from a firſt cauſe: theſe are improperly called cauſes, in regard they do not, ſtrictly ſpeaking, act at all, but are acted on: of this kind are all thoſe that we term natural cauſes.

Philoſophers are divided as to the action whereby ſecond cauſes produce their effects: ſome maintain, that the cauſalty cannot be produced, ſince it is that which produces: others will have them to act truly by their action; but they are at a loſs ſtill about that action; ſome do not allow that corporeal ſubſtances can produce any thing but accidents: the ſyſtem of Aviſenna is, that God produces, immediately, a moſt perfect ſpiritual ſubſtance; this produces another, leſs perfect; that, a third; and thus to the laſt; which laſt produces all the corporeal ſubſtances; and thoſe corporeal ſubſtances, accidents: as to the manner of their agency, ſome maintain, that the ſubſtantial form of ſecond cauſes produces forms, and the accidental ones, accidents: others, that forms produce other forms and accidents; and others, that accidents alone are capable of producing accidents and forms.

Cauſes

Causes are distinguished, by the schools, into efficient, material, final, and formal.

Efficient CAUSES are the agents employed in the production of any thing.

Material CAUSES, the subjects whereon the agents work; or the materials whereof the thing is produced.

Final CAUSES are the motives inducing an agent to act; or the design and purpose for which the thing was done.

Lord Bacon says, that the final cause is so far from being serviceable, that it corrupts the sciences, unless it be restrained to human actions: however, continues he, final causes are not false, nor unworthy of inquiry in metaphysics; but their excursions into the limits of physical causes hath made a great devastation in that province; otherwise, when contained within their own bounds, they are not repugnant to physical causes.

Formal CAUSE, the change resulting from the action; or that which determines a thing to be this, and distinguishes it from every thing else: thus, the soul is held the formal cause of man.

Causes are again distinguished into physical and moral.

Physical CAUSE, that which produces a sensible corporeal effect; as the sun is the physical cause of light: others define it, that which produces its effect by a physical virtue.

The cartesians resolve all physical causes into occasional ones.

Occasional CAUSES, therefore, are only the occasions, not the direct causes of their effects. See the article OCCASION.

The soul, say these philosophers, is not able to act on the body; nor the body, reciprocally, on the soul: to keep up an intercourse between them, God, on occasion of the motion of the body, impresses a sensation on the soul; and an occasion of a sentiment of the soul, impresses a motion on the body; the motions therefore of the soul and body, are only occasional causes of what passes in the one or in the other; thus, say they, the stroke or percussion is only the occasional cause of the motion produced in the body struck: it is God, who is the direct efficient cause, &c.

Moral CAUSE, that which produces a real effect, but in things immaterial; as repentance is the cause of forgiveness. A moral cause is also defined, that which determines us, though not necessarily, to do, or not to do, any thing; as advice, intreaties, commands, menaces, &c.

It is to be observed, that, in this sense, a moral cause is only applicable to a free intelligent agent: it is also observable, that the latter notion of a physical as well as a moral cause is the most just, clear, and distinct.

Causes are again distinguished into universal, or particular; principal, or instrumental; total or partial; univocal, equivocal, &c.

Equivocal CAUSE, that which is of a different kind and denomination from its effect: thus it is, the sun is said to be the cause of animal life.

Instrumental CAUSE, that made use of by the principal, to produce its effect; or that which is excited to produce an effect beyond the measure of its own perfection: some will have all secondary causes to be instrumental ones.

Partial CAUSE, that which concurs with some other in producing the effect.

Particular CAUSE, that which can only produce a single effect, or a certain kind of effect.

Principal CAUSE, that which gives motion to the instrument, or which does not operate beyond its own natural efficacy.

Total CAUSE, that which produces the whole effect.

Univocal CAUSE, that which is of the same kind and denomination with its effect; as, love is the cause of love.

Universal CAUSE, that which, by the extent of its power, may produce all effects.

CAUSE, among civilians, the same with action. See the article ACTION.

CAUSEWAY, or CAUSEY, a massive construction of stones, stakes, and fascines; or an elevation of fat viscous earth, well beaten; serving either as a road in wet marshy places, or as a mole to retain the waters of a pond, or prevent a river from overflowing the lower grounds.

CAUSTICS, in physic, an appellation given to medicines of so hot and fiery a nature, that, being applied, consume, and, as it were, burn the texture of the parts, like hot iron.

Caustics differ from cauteries in that they perform their effects slower, and with less force and pain: they are used to eat off proud fungous flesh; they also penetrate within hard callous bodies, and liquify the humours; and are particularly applied in abscesses and imposthumations, to

eat through to the ſuppurated matter, and give it vent; ſometimes alſo to make iſſues, in parts where cutting is difficult, or inconvenient.

Cauſtics are generally divided into four ſorts, the common ſtronger cauſtic, the common milder cauſtic, the antimonial cauſtic, and the lunar cauſtic.

The ſtronger cauſtic is prepared by boiling to a fourth part, any quantity of the lees of almond ſoap, adding lime, that has been kept in a veſſel pretty cloſe ſtopt for ſeveral months; the lime is to be added till all the liquor is abſorbed, and the whole reduced to a paſte, which is to be kept in a veſſel well ſtopt.

The common milder cauſtic is prepared by taking equal parts of ſoft ſoap, and freſh quick lime, and mixing them at the time of uſing.

The antimonial cauſtic is prepared thus; take of antimony one pound, of corroſive ſublimate, two pounds; and being reduced ſeparately into powder, mix them well, and diſtil them in a retort with a wide neck, in a gentle heat of ſand; let what aſcends into the neck of the retort be expoſed to the air, that it may run into a liquor.

The method of preparing the lunar cauſtic is as follows: diſſolve pure ſilver by a ſand-heat, in about twice its weight of aqua fortis; then dry away the humidity with a gentle fire, afterwards melt it in a crucible, that it may be poured into proper moulds, carefully avoiding overmuch heat, leſt the matter ſhould grow too thick.

CAUSTIC CURVE, in the higher geometry, a curve formed by the concourſe or coincidence of the rays of light, reflected, or refracted, from ſome other curve.

Every curve has its twofold cauſtic; accordingly, cauſtics are divided into catacauſtics, and diacauſtics; the one formed by reflection, the other by refraction. See the articles CATACAUSTIC and DIACAUSTIC.

CAUSTIC GLASSES, the ſame with burning-glaſſes. See BURNING-GLASS.

CAUSUS, or BURNING-FEVER, a ſpecies of continual fever, accompanied with a remarkable inflammation of the blood. The principal ſymptoms are a heat almoſt burning to the touch, the breath extremely hot, a dryneſs of the whole ſkin, the tongue parched and rough, and an unquenchable thirſt. See the article FEVER.

CAUTERIZATION, the application of cauteries to any part of the body. See the next article.

Cauterization with moxa is wonderfully extolled by ſome as the moſt effectual means to extirpate the gout; but it is at preſent in diſuſe, and not without reaſon; for beſides the acute pain which it creates, it is frequently found to have little or no effect. This cauterization, however, is ſaid to be at preſent in uſe among the Arabians; and the Japoneſe and Chineſe have it in ſo great eſteem, that it makes one of their chief remedies.

CAUTERY, in ſurgery, a medicine for burning, eating, or corroding any ſolid part of the body.

Cauteries are diſtinguiſhed into two claſſes, actual and potential: by actual cauteries are meant red hot inſtruments, uſually of iron, which are applied to many parts and diſorders; and by potential cauteries are underſtood certain kinds of corroding medicines. See the article CAUSTICS.

Cauteries have manifold uſes, for they not only deſtroy the dead parts of carious bones, remove cancers, ſchirri, excreſcencies, carbuncles, and mortified parts, but they are alſo uſed to make iſſues and ſetons, to ſtop hæmorrhages in wounds and amputations, and laſtly to remove an amauroſis, epilepſy, ſciatica, with pains in the teeth and other parts.

For the right application of cauteries, various obſervations are neceſſary: 1. The ſize and figure of the cautery ſhould correſpond to that of the diſordered part. 2. It is neceſſary to ſecure the ſound parts from the cautery, to prevent giving more than neceſſary pain. 3. When the inſtrument is ſufficiently hot, it is to be applied, and ſtrongly impreſſed upon the diſordered part, till the bottom of it appears ſound. To effect this more ſpeedily, it will be neceſſary to have ſeveral cauteries in readineſs, a caution more eſpecially to be obſerved in carious bones and large hæmorrhages.

Several phyſicians have obſerved, that cauteries ſucceeded in apoplexies when all other remedies have failed. But for the part to which the cautery is to be applied there are various opinions; ſome prefer the occiput; ſome the nape of the neck, between the firſt and ſecond vertebræ; ſome the meeting of the coronal and ſagittal ſutures, and others pitch upon other parts. Miſtichellius, an italian writer, aſſerts, that no part can be ſo proper for

cauterizations in apoplexies, as the ſoles of the feet.

CAUTION, *cautio*, in the civil and ſcotch law, denotes much the ſame with what, in the law of England, is called bail. See the article BAIL.

CAUTIONE ADMITTENDA, in law, a writ which lies againſt a biſhop that holds an excommunicated perſon in priſon for contempt, after he has offered ſufficient caution or ſecurity to obey the orders of the church. On receipt of this writ, the ſheriff warns the biſhop to take caution.

CAXA, a little coin made of lead, mixed with ſome ſcoria of copper, ſtruck in China, but current chiefly at Bantam in the iſland of Java, and ſome of the neighbouring iſlands.

The caxas are of two kinds, great and ſmall. Of the ſmall 300,000 are equal to fifty-ſix livres five ſols french money; and of the great, 6000 are equal to four ſhillings and ſix-pence ſterling.

CAXAMALCA, the name of a town and diſtrict of Peru, in South America, where there was a moſt ſumptuous palace belonging to the Yncas, and a magnificent temple dedicated to the ſun.

It was at Caxamalca that Pizarro put to death Athualpha, their laſt king.

CAZEMATE, or CASEMATE, in fortification, a certain retired platform in the flank of a baſtion, for the defence of the moat and face of the oppoſite baſtion. Sometimes there are three ſuch platforms one behind another, the uppermoſt of which is on the terre plein of the baſtion, which makes the other two be called *places baſſes*, or low places. They are covered from the enemies batteries by a work of earth added to the angle of the ſhoulder, of a circular and ſometimes of a ſquare form, called ſhoulder, orillon, or epaulement. See the articles ORILLON, &c. It is very ſeldom that cazemates are uſed now a-days, becauſe the enemies batteries are apt to bury the cannon they contain under the ruins of their vaults; beſides, that the ſmoke with which they are continually filled, renders them unſupportable to the engineers. It is for this reaſon the later engineers make them open at top, contenting themſelves with fortifying them with a parapet.

CASEMATE is alſo uſed for a well with ſeveral ſubterraneous branches dug in the paſſage of the baſtion, till the miner is heard at work, and air given to the mine.

CAZERN. See the article CASERN.

CEANOTHUS, in botany, a genus of the pentandria-monogynia claſs of plants, the calyx of which is a turbinated ſingle-leaved perianthium, permanent, and cut at the brim into five acute ſegments; the corolla conſiſts of five equal, roundiſh, compreſſed, obtuſe, patent petals, leſs than the cup; the fruit is a dry berry, containing three cells, in each of which is lodged an oval ſingle ſeed.

CEDAR, *cedrus*, according to Tournefort, makes a diſtinct genus of plants, but is comprehended by Linnæus among the junipers. See the article JUNIPER.

Cedar-wood, which is of a fragrant ſmell and fine grain, is almoſt incorruptible by reaſon of its bitterneſs, which renders it diſtaſteful to worms. Hiſtorians tell us, that ſome of this timber was found in the temple of Apollo at Utica, two thouſand years old. The cedars of Lebanon are famous, as having been uſed by Solomon in building the temple of Jeruſalem.

CEDRIA, κεδρία, a reſinous liquor, iſſuing from the great cedar tree, or cedar of Lebanon. The word is alſo written cedrium, κεδριον, and cedrinum, κεδρινον.

Cedria, when good, yields a ſtrong ſmell, is tranſparent, of a thick fatty conſiſtence, ſo that in pouring it out, it does not fall too faſt or freely, but equally drop by drop. It is poſſeſſed of two oppoſite qualities, *viz.* to preſerve dead bodies, by its drying and conſuming ſuperfluous moiſture, without damaging the ſolid parts; and to putrify the ſoft and tender parts of living bodies, without exciting any pain.

The cedria is properly the tear of the cedar. Some call it the gum, others the pitch of the cedar. The ſame denomination is alſo given to the cedreleon, or oil of the cedars, which differs little from the reſin, except that it is of a thinner conſiſtence.

CEDRUS, the CEDAR, in botany. See the article CEDAR.

CEGINUS, in aſtronomy, a fixed ſtar of the third magnitude, in the left ſhoulder of Bootes. See the article BOOTES.

Its longitude, according to Hevelius, for the year 1700, was 13° 26′ 4″, and its latitude northern 49° 35′ 47″.

CEILING, in architecture, the upper part or roof of a room, being a lay or covering of plaſter over laths, nailed on the bottom of the joiſts which bear the floor of the upper room, or on joiſts put up for that purpoſe where there is no upper room, hence called ceiling joiſts.

These

These plaistered ceilings are much used in England, more than in any other country: nor are they without their advantages, as they make the room lightsome, are good in case of fire, &c.

CELANDINE, *chelidonium*, in botany. See the article CHELIDONIUM.

CELARENT, in logic, a mode of syllogism, wherein the major and conclusion are universal negative propositions, and the minor an universal affirmative. As

CE No man that is a hypocrite can be saved:

LA Every man who with his lips only cries Lord, Lord, is a hypocrite:

RENT Therefore, no man, who with his lips only cries Lord, Lord, can be saved.

CELASTRUS, in botany, a genus of the pentandria-monogynia class of plants, whose corolla consists of five equal, oval, patent, sessile petals, with their ends turned back: the fruit is a coloured, oval capsule, obtusely trigonal, gibbous, formed of three valves, and containing three cells, in each of which are small, oval, coloured seeds, smooth, and half covered by a calyptra, which is also coloured, and has an unequal rim, divided into four segments.

CELEBES, or MACASSER, an island of the indian ocean, situated between 116° and 124° east longitude, and between 2° north and 6° south latitude.

CELERES, in roman antiquity, a regiment of body guards belonging to the roman kings, established by Romulus, and composed of 300 young men chosen out of the most illustrious roman families, and approved by the suffrages of the curiæ of the people, each of which furnished ten.

CELERI, in botany, the english name for several species of apium. See APIUM.

CELERITY, in mechanics, the swiftness of any body in motion.

It is also defined to be an affection of motion, by which any moveable body runs through a given space in a given time. See VELOCITY and MOTION.

CELESTIAL, or COELESTIAL. See the article COELESTIAL.

CELESTINS, in church-history, a religious order of christians, reformed from the bernardins by pope Celestin V. Their rules are divided into three parts; the first, of the provincial chapters, and the elections of superiors; the second contains the regular observances; and the third, the visitation and correction of the monks. The celestins rise two hours after midnight to say matins: they eat no flesh at any time, except when they are sick: they fast every Wednesday and Friday to the feast of the exaltation of the holy cross; and from that feast to Easter, every day.

CELEUSMA, κέλευσμα, in antiquity, a naval shout serving as a signal for the mariners, or rowers in ships, to ply their oars, to row brisker, or to cease from rowing: it is also made use of to signify the joyful acclamation of vintagers, and the shouts of the conquerors, insulting over the vanquished.

CELIAC, or COELIAC PASSION, a sort of diarrhœa, or flux of the belly, wherein the aliment comes away either crude or chylified instead of excrements. See the article COELIAC PASSION.

CELIBACY, the state of unmarried persons, to which, according to the doctrine, or at least the discipline, of the church of Rome, the clergy are obliged.

Dr. Bingham observes, that the prohibiting marriage after ordination, was an incróachment upon the primitive rule, and never received in the greek church; so that it is not to be reckoned among the standing rules of discipline, which concerned the whole church. In the churches of France and Germany, celibacy was not universally practised by the clergy in the eighth century, as appears by the sixth canon of pope Adrian's collection. As to the settling celibacy in the western church, it was brought about with extreme difficulty, a great many provincial councils were convened in Germany and elsewhere. In the church of England, the marriage of the clergy was generally practised to the end of the tenth century, and in a great measure to the beginning of the twelfth.

That celibacy has no pretence of divine or apostolical institution, seems no difficult point to prove: whence it is, at first, hard to conceive from what motive the court of Rome persisted so very obstinately to impose this institution on the clergy. But we are to observe, that this was a leading step to the execution of the project formed of making the clergy independent of princes, and rendering them a separate body, to be governed by their own laws. In effect, while priests had children, it was very difficult to prevent their dependance upon princes, whose favours have such an influence on private men: but having no family, they were more at liberty to adhere to the pope.

CELL, *cella*, a little apartment or chamber, ſuch as thoſe wherein the antient monks, ſolitaries, and hermits, lived in retirement.

Cells are ſtill retained in divers monaſteries. Thus the dormitory is frequently divided into ſo many cells. The carthuſians have each a ſeparate houſe, which ſerve them as a cell.

The hall wherein the roman conclave is held, is divided by partitions into divers cells, for the ſeveral cardinals to lodge in.

CELLS are alſo the little diviſions in honeycombs, which are always regular hexagons.

CELLS, in botany, the hollow places between the partitions in the pods, huſks, and other ſeed-veſſels of plants: according as there is one, two, three, &c. of theſe cells, the veſſel is ſaid to be unilocular, bilocular, trilocular, &c.

CELLS, in anatomy, little bags or bladders where fluids or other matters are lodged, called locu i, cellulæ, &c.

Adipoſe CELLS. See the article ADIPOSE.

CELL, in geography, a town of Triers, in the circle of the lower Rhine, in Germany, ſituated on the eaſtern ſhore of the Moſelle, twenty ſix miles north-eaſt of Triers; eaſt long. 6° 45′, and north lat. 50° 10′.

CELLAR, the loweſt room in a houſe, the ceiling of which is level with the ſurface of the ground on which the houſe ſtands, or at moſt but very little higher.

As to the ſituation of cellars, Sir Henry Wotton ſays, they ought, unleſs the whole houſe be cellared, to be ſituated on the north ſide of the houſe, as ſtanding in need of a cool and freſh air.

CELLARER, an officer in a monaſtery, who takes care of the temporalities, and furniſhes the convent with proviſion.

The word is borrowed from the roman law, for cellerarius, in the digeſts, ſignifies a comptroller of the accounts.

CELOSIA, in botany, a genus of the pentandria-monogynia claſs of plants, the flower of which conſiſts of five lanceolated, acuminated, erect, rigid, and permanent petals; the fruit is a globoſe capſule, ſurrounded with a corolla, with one cell opening horizontally, and containing ſeveral roundiſh emarginated ſeeds.

CELSIA, in botany, a genus of the didynamia-angioſpermia claſs of plants, the flower of which is monopetalous, with a plain limb and roundiſh ſegments: the fruit is a roundiſh capſule, compreſſed at the top, acuminated, adhering to the cup, with two cells, containing ſeveral ſmall angulated ſeeds.

CELTIS, the NETTLE-TREE, in botany, a genus of plants belonging to the polygamia-monoecia claſs of plants. In the hermaphrodite flower there is no corolla: the fruit is a globoſe drupe with one cell, containing a roundiſh nut. In the male flower there is no corolla.

The fruit of this plant, when not too ripe, is aſtringent, and binds the belly; and the decoction of it is good for a dyſentery, and for women labouring under an immoderate flux of the menſes.

CEMENT, or CÆMENT. See the article CÆMENT.

CEMENTATION, or CÆMENTATION. See the article CÆMENTATION.

CEMETERY, or COEMETERY. See the article COEMETERY.

CENCHRIS, in zoology, a genus of ſerpents, the abdomen of which is covered with 240 ſcuta, and the tail with 64; add to this, that its head is covered with ſmall ſcales, and the tail has no appendix. It is otherwiſe called boiguacu. See the article BOIGUACU.

CENCHRUS, in botany, a genus of the polygamia-monoecia claſs of plants. There are two flowers, the one male, the other hermaphrodite; the proper flower is ſingle, with two lanceolated, acuminated, concave valves: there is no pericarpium, and but one roundiſh ſeed.

CENOBITE, or COENOBITE. See the article COENOBITE.

CENOTAPH, κενοτάφιον, in antiquity, a monument erected in honour of the dead, but not containing any of their remains. Of theſe there were two ſorts. One erected for ſuch perſons as had been honoured with funeral rites in another place; and the ſecond ſort, for thoſe that had never obtained a juſt funeral.

The ſign whereby honorary ſepulchres were diſtinguiſhed from others, was commonly the wreck of a ſhip, to denote the deceaſe of the perſon in ſome foreign country.

CENSAL, in commerce, a word uſed on the coaſt of Provence, and in the ports of the Levant, to denote a broker. See the article BROKER.

Moſt of the cenſals of the Levant, and particularly thoſe at Grand Cairo, are Arabs by nation. They commonly receive one half *per cent.* for their trouble.

CENSER, a ſacred inſtrument made uſe of in the religious rites of the antients.

It

It was a vaſe, containing incenſe to be uſed in ſacrificing to the gods. There is the repreſentation of one in Montfaucon's antiquities, under the figure of a ſhallow cup with a lid to it, and chains running through ſmall handles. Cenſers were likewiſe in uſe among the Jews, as we find in the 1 Kings vii. 50. "Solomon, when he prepared furniture for "the temple of the Lord, among other "things made cenſers of pure gold." The cenſer is alſo uſed in romiſh churches.

CENSOR, in roman antiquity, a magiſtrate, whoſe buſineſs it was to reform the manners and to value the eſtates of the people.

There were two cenſors firſt created in the 311th year of Rome, upon the ſenate's obſerving that the conſuls were generally ſo much taken up in military actions, as to have no leiſure to attend to private affairs. At firſt they were choſen out of the ſenate, but after the plebeians had got the conſulate open to them, they ſoon arrived at the cenſorſhip. The cenſors degraded ſenators upon occaſion, made the *princeps ſenatus*, inſpected the management of private families relating to education and expence, and, in ſhort, had authority to reprimand and correct any irregularity, and to take care that perſons both in public and private capacity, behaved themſelves in a becoming manner. Cicero reduces their functions to the numbering of the people, the correction and reformation of manners, the eſtimating the effects of each citizen, the proportioning of taxes, the ſuperintendence of tribute, the excluſion from the temples, and the care of the public places.

The office was ſo conſiderable, that none aſpired to it till they had paſſed all the reſt; ſo that it was looked on as ſurpriſing, that Craſſus ſhould be admitted cenſor, without having been either conſul or prætor. It was held at firſt for five years, but Mamercus Æmilius ſhortened the term to eighteen months.

After the cenſors were elected in the comitia centuriata, they proceeded to the capitol, where they took an oath not to manage either by favour or diſaffection, but to act equitably and impartially thro' the whole courſe of their adminiſtration: and notwithſtanding their great authority, they were obliged to give an account of their management to the tribunes and *ædiles curules*. In proceſs of time, the dignity of this office dwindled very much; under the emperors it ſunk to nothing, as their majeſties engroſſed all the branches of that juriſdiction. The republic of Venice has at this day a cenſor of manners of their people, whoſe office laſts ſix months.

CENSOR *of books*, are a body of doctors or others eſtabliſhed in divers countries to examine all books before they go to the preſs, and to ſee they contain nothing contrary to faith and good manners.

At Paris, the faculty of theology claim this privilege, as granted to them by the pope; but in 1624 new commiſſions of four doctors were created by letters patent the ſole cenſors of all books, and anſwerable for every thing contained therein.

In England, we had formerly an officer of this kind, under the title of licenſer of the preſs; but ſince the revolution, our preſs has been laid under no ſuch reſtraint.

CENSURE, a judgment which condemns ſome book, perſon or action, or more particularly a reprimand from a ſuperior.

Eccleſiaſtical cenſures, are penalties by which, for ſome remarkable miſbehaviour, chriſtians are deprived of the communion of the church, or prohibited to execute the ſacerdotal office.

There are different kinds of cenſures diſtinguiſhed by canoniſts, 1. Into thoſe called *de jure*, that is, ſuch as are appointed by law, and into thoſe *ab homine*, which are pronounced by a ſuperior for ſome particular fact. 2. Into cenſures *latæ ſententiæ*, which are incurred by committing the prohibited actions without any need of judgment pronounced; and cenſures *ſententiæ ferendæ*, which, though deſerved by committing the fault againſt which the penalty is levelled, yet the cenſure is not incurred till ſentence is pronounced by an officer commiſſioned for that purpoſe. 3. Into juſt and unjuſt cenſures. 4. Into valid and invalid. And, 5. Into thoſe reſerved for a ſuperior judge, and thoſe not reſerved.

The pains and penalties attending cenſures, are excommunication, ſuſpenſion, interdict, irregularity, depoſition, &c. See each of theſe under its proper head.

CENSURE in ſeveral manors of Cornwall and Devon, a cuſtom by which all reſidents above the age of ſixteen, are cited to ſwear fealty to the lord, and to pay 11 d. *per* poll, and 1 d. yearly after for ever. The perſons thus ſworn are called cenſors.

CENSUS, in roman antiquity, an authentic

tic declaration made before the cenſors, by the ſeveral ſubjects of the empire, of their reſpective names and places of abode. This declaration was regiſtered by the cenſors, and contained an enumeration, in writing, of all the eſtates, lands, and inheritances they poſſeſſed; their quantity, quality, place, wives, children, domeſtics, tenants, ſlaves.

The cenſus was inſtituted by Servius Tullius, and was held every five years. It was of great ſervice to the republic, becauſe, by means of it, they diſcovered the number of citizens capable of bearing arms, and the money they could afford for the expence of a war. It went thro' all ranks of people, tho' under different names: that of the common people was called *cenſus*; that of the knights, *cenſus*, *recenſio*, *recognitio*; that of the ſenators, *lectio*, *relectio*.

The cenſus which intitled one to the dignity of a knight, was 400,000 ſeſterces: that of a ſenator, was double that ſum.

In the ſoconian law, cenſus is uſed for a man, whoſe eſtate in the cenſor's books is valued at 100,000 ſeſterces.

CENT, in commerce, an abridgment of centum, is uſed to expreſs the profit or loſs ariſing from the ſale of any commodity. Thus we ſay, there is 10 *per cent.* profit, or 10 *per cent.* loſs; which is $\frac{1}{10}$ profit, or $\frac{1}{10}$ loſs, upon the ſale of the whole. In the trade of money, it ſignifies the benefit or intereſt of any ſum of money. Thus money is worth 4 or 5 *per cent.* upon exchange. But in brokerage, it muſt be obſerved, that cent is applied in a different manner. For example, if a broker or exchange agent takes $\frac{1}{2}$ *per cent.* for the contracts made by his interpoſition, it is to be underſtood that there is paid to him $\frac{1}{2}$ of a pound, *viz.* 10 *s.* 6 *d.* for every 100 *l.* he negotiated.

When an agent or factor ſets down at the bottom of an invoice, which he ſends to his principal, a *per cent.* commiſſion, it ſignifies that he takes ſo many times 1 *l.* as there are 100 *l.* in the ſum total of the invoice; and it muſt be obſerved, that this commiſſion is taken both on the principal price of the commodities bought, and on the charges and expences incurred, as duties paid, poſterage, package, poſtage of letters, &c.

CENTAUR, or HIPPOCENTAUR, in antient poetry, denotes a fabulous kind of animal, half man, half horſe. The Theſſalians, who firſt taught the art of breaking horſes, appearing on horſe-back to make only one body with the animal on which they rode, gave riſe to the fiction of the hippocentaur.

CENTAUR, *centaurus*, in aſtronomy, a conſtellation of the ſouthern hemiſphere commonly joined with the wolf, and called *centaurus cum lupo*. In Ptolemy's catalogue it conſiſts of 19 ſtars; in Tycho's of 4; and of 13 in the britannic catalogue.

CENTAUREA, CENTAURY, in botany, a genus of the ſyngeneſia-polygamia-fruſtranea claſs of plants: the compound flower of which is tubulated and diſform: the proper one, of the hermaphrodite, is monopetalous, with a ventricoſe, oblong, erect limb, terminating in five linear erect ſegments: the female flower is monopetalous, with an oblong, oblique, unequally divided limb. There is no pericarpium except the calyx, which is changed into one, and connivent, containing ſolitary ſeeds in the hermaphrodite: the females prove abortive. See plate XXXVIII. fig. 2.

The root of this plant is eſteemed in fluxes, dyſenteries, ſpitting of blood, and by ſome is much commended in all diſeaſes ariſing from the obſtructions of the meſeriac veins.

This genus comprehends the centaureum majus et minus of Tournefort, the root and leaves of which are eſteemed vulnerary, ſtomachic, and aſtringent.

CENTAURY. See CENTAUREA.

CENTER, or CENTRE, *centrum*, in geometry, a point equally diſtant from the extremities of a line, figure or body.

CENTER *of a baſtion*, a point in the middle of the gorge of a baſtion, whence the capital line commences, and is generally at the angle of the inner polygon. See the article BASTION.

CENTER *of a battalion*, the middle of a battalion, where there is generally left a ſquare ſpace for holding the cloaths and baggage.

CENTER *of a circle*, a point in the middle of a circle, or circular figure, from which all lines drawn to the circumference are equal.

CENTER *of a conic ſection*, a point wherein the diameters interſect each other. In the ellipſis, this point is within the figure, and in the hyperbola, without.

CENTER *of a curve of the higher kind*, the point where two diameters concur. When all

Fig. 1. CENTER.

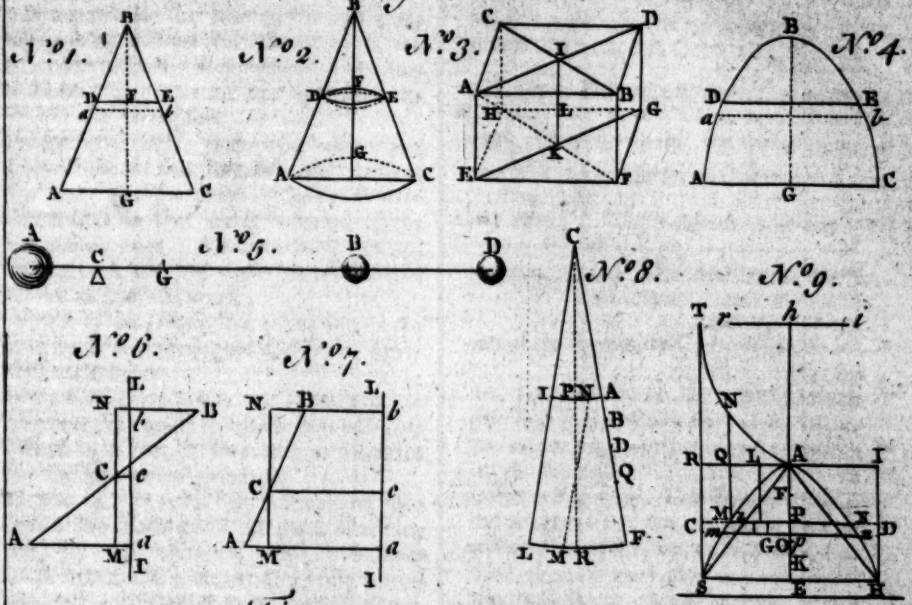


Fig. 2. CENTRAL *FORCES.*

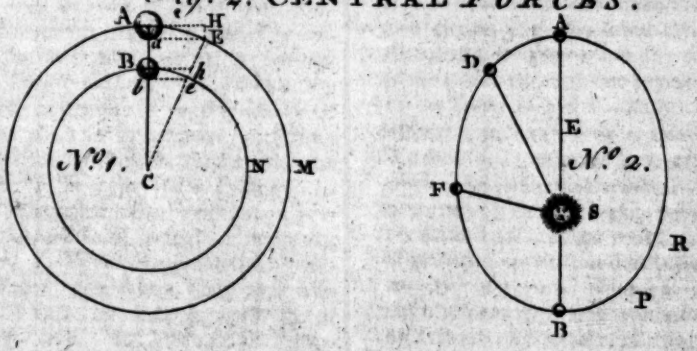
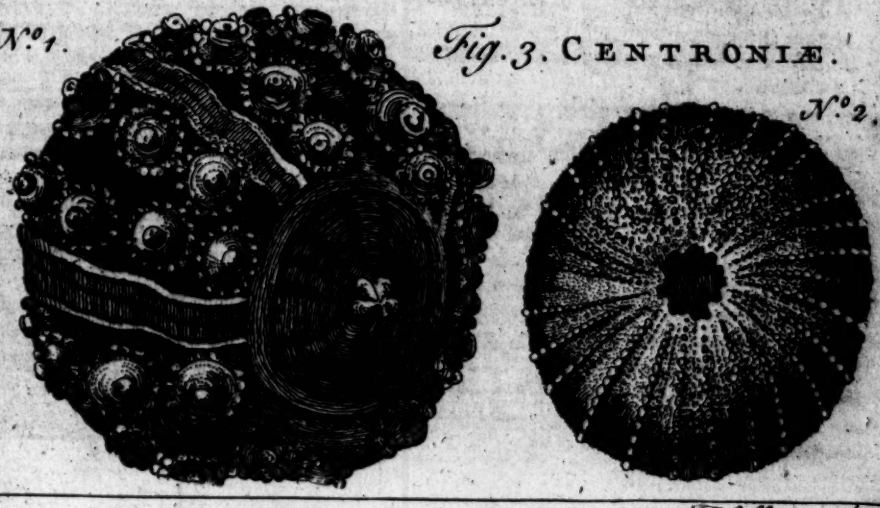


Fig. 3. CENTRONIÆ.



T. Jefferys sculp.

BRITISH MUSEUM

all the diameters concur in the ſame point, Sir Iſaac Newton calls it the general center.

CENTER *of the equant*, in the old aſtronomy, a point in the line of the aphelion, being ſo far diſtant from the center of the eccentric towards the aphelion, as the ſun is from the center of the eccentric towards the perihelion.

CENTER *of a dial*, that point where the axis of the world interſects the plane of the dial; and therefore in dials that have centers, it is that point wherein all the hour-lines meet. All dials have centers, except ſuch as have their planes parallel to the axis of the world.

CENTER *of an ellipſis*, the point where the tranſverſe and conjugate diameters interſect each other.

CENTER *of gravitation and attraction*, in phyſics, that point to which the revolving planet or comet is impelled or attracted by the impetus of gravity.

CENTER *of gravity*, in mechanics, that point about which all the parts of a body do, in any ſituation, exactly balance each other. Hence, 1. If a body be ſuſpended by this point as the center of motion, it will remain at reſt in any poſition indifferently. 2. If a body be ſuſpended in any other point, it can reſt only in two poſitions, *viz.* when the ſaid center of gravity is exactly above or below the point of ſuſpenſion. 3. When the center of gravity is ſupported, the whole body is kept from falling. 4. Becauſe this point has a conſtant endeavour to deſcend to the center of the earth, therefore, 5. When the point is at liberty to deſcend, the whole body muſt alſo deſcend, either by ſliding, rolling, or tumbling down. 6. The center of gravity in regular uniform and homogeneal bodies, as ſquares, circles, *&c.* is the middle point in a line connecting any two oppoſite points or angles. Wherefore, if ſuch a line be biſected, the point of ſection will be the center of gravity.

To find the center of gravity of a triangle. Let B G (plate XXXIX. fig. 1. N° 1.) biſect the baſe A C of the triangle A B C, it will alſo biſect every other line D E drawn parallel to the baſe, conſequently the center of gravity of the triangle will be found ſomewhere in the line B G. The area of the triangle may be conſidered as conſiſting of an infinite number of indefinitely ſmall parallelograms, D E *b a*, each of which is to be conſidered as a weight, and alſo as the fluxion of the area of the triangle, and ſo may be expreſſed by $a y \dot{x}$, (putting B F $= x$, and F E $= y$) if this fluxionary weight be multiplied by its velocity $\dot{x}$, we ſhall have $a y \dot{x} \dot{x}$ for its momentum. Now put B G $= a$ and A C $= b$, then B G (a) : A C (b) :: B F (x) : D E $= \frac{bx}{a} = y$, therefore the fluxion of the weights $a y \dot{x} = \frac{b x \dot{x}}{a}$; and the fluxion of the momenta $a y x \dot{x} = \frac{b x x \dot{x}}{a}$, whence the fluent of the latter, *viz.* $\frac{b x^3}{3 a}$ divided by the fluent of the former, *viz.* $\frac{b x^2}{2 a}$ will give $\frac{2}{3} x$ for the diſtance of the point from B in the line B F, which has a velocity equal to the mean velocity of all the particles in the triangle D B E, and is therefore its center of gravity. Conſequently the center of gravity of any triangle A B C, is diſtant from the vertex B $\frac{2}{3}$ B G a right line drawn from the angle B biſecting the baſe A C. And ſince the ſection of a ſuperficial or hollow cone is a triangle, and circles have the ſame ratio as their diameters, it follows that the circle whoſe plane paſſes through the center of gravity of the cone, is $\frac{2}{3}$ of the length of the ſide diſtant from the vertex of the ſaid cone.

To find the center of gravity of a ſolid cone. As the cone conſiſts of an infinite number of circular areas, which may be conſidered as ſo many weights, the center of gravity may be found as before, by putting B E $= x$ (*ibid.* N° 2.) B G $= a$, the circular area D F E $= y$, and A G C $= b$; and from the nature of the cone, a^2 : x^2 :: b : $y = \frac{b x^2}{a^2}$: but $\dot{x} y = \frac{b x^2 \dot{x}}{a^2}$ = fluxion of the weights; and $y x \dot{x} = \frac{b x^3 \dot{x}}{a^2}$ = fluxion of the momenta, whence the fluent of the latter, *viz.* $\frac{b x^4}{4 a^2}$ divided by the fluent of the former $\frac{b x^3}{3 a^2}$ will give $\frac{3}{4} x$ for the center of gravity of the part D B E F, conſequently the center of gravity of the cone A B C G is diſtant from the vertex B $\frac{3}{4}$ of the ſide B G, in a circle parallel to the baſe.

To find the center of gravity in a parallelogram and parallelopiped, draw the diagonal

diagonal AD and EG, *(ibid.* N° 3.) likewiſe CB and HF; ſince each diagonal AD and CB divides the parallelogram ACDB into two equal parts, each paſſes through the center of gravity, conſequently the point of interſection I muſt be the center of gravity of the parallelogram. In like manner, ſince both the plane CBFH and ADGE divide the parallelopiped into two equal parts, each paſſes through its center of gravity, ſo that the common interſection IK is the diameter of gravity, the middle whereof is the center. After the ſame manner may the center of gravity be found in priſms and cylinders, it being the middle point of the right line that joins the center of gravity of their oppoſite baſes.

The center of gravity of a parabola, is found as in the triangle and cone. Thus, let BF in the parabola ABC *(ibid.* N° 4.) be equal to x, DE $= y$, then will $y\dot{x}$ be the fluxionary weight, and $yx\dot{x}$ the fluxion of the momenta; but from the nature of the curve, we have $y = x^{\frac{1}{2}}$; whence $y\dot{x} = x^{\frac{1}{2}}\dot{x}$, and $y\,x\,\dot{x} = x^{\frac{1}{2}}\dot{x}\,x$, whoſe fluent $\frac{2}{5}x^{\frac{1}{2}}$ divided by $\frac{2}{3}x^{\frac{3}{2}}$ the fluent of $x^{\frac{1}{2}}\dot{x}$ will give $\frac{3}{5}x = \frac{3}{5}$BF for the diſtance of the center of gravity from the vertex B in the part DBE; and ſo $\frac{2}{5}$ of BG is that center in the axis of the whole parabola ABC from the vertex B.

The center of gravity in the human body, is ſituated in that part which is called the pelvis, or in the middle between the hips. For the center of gravity of ſegments, parabolic, conoids, ſpheroids, *&c.* we refer to Wolfius.

Common CENTER *of gravity of two or more bodies*, a point ſo ſituated in a right line joining the centers of theſe bodies, that if this point be ſuſpended, the bodies will equiponderate, and reſt in any ſituation. In two equal bodies, it is at equal diſtances from both: when the bodies are unequal, it is nearer to the greater body, in proportion as it is greater than the other; or the diſtances from the centers are inverſely as the bodies. Let A *(ibid.* N° 5.) be greater than B, join AB, upon which take the point C, ſo that CA : CB :: B : A, or that $A \times CA = B \times CB$, then is C the center of gravity of the bodies A and B. If the center of gravity of three bodies be required, firſt find C the center of gravity of A and B; and ſuppoſing a body to be placed there equal to the ſum of A and B, find G the center of gravity of it and D; then ſhall G be the center of gravity of the three bodies A, B and D. In like manner the center of gravity of any number of bodies is determined.

The ſum of the products that ariſe by multiplying the bodies by their reſpective diſtances, from a right line or plane given in poſition, is equal to the product of the ſum of the bodies multiplied by the diſtance of the center of gravity from the ſame right line or plane, when all the bodies are on the ſame ſide of it: but when ſome of them are on the oppoſite ſide, their products, when multiplied by their reſpective diſtances from it, are to be conſidered as negative, or to be ſubducted. Let IL *(ibid.* N° 7.) be the right line given in poſition, C the center of gravity of the bodies A and B; A a, B b, C c, perpendiculars to IL in the points a, b, and c; then if the bodies A and B be on the ſame ſide of IL, we ſhall find $A \times Aa + B \times Bb = \overline{A + B} \times Cc$. For drawing thro' C, the right line MN parallel to IL meeting A a in M, and B b in N, we have A : B :: BC : AC by the property of the center of gravity, and conſequently A : B :: BN : AM, or $A \times AM = B \times BN$; but $A \times Aa + B \times Bb = A \times Cc + A \times AM + B \times Cc - B \times BN = A \times Cc + B \times Cc = \overline{A + B} \times Cc$. When B is on the other ſide of the right line IL *(ib.* N° 6.) and C on the ſame ſide with A, then $A \times Aa - B \times Bb = A \times Cc + A \times AM - B \times BN + B \times Cc = \overline{A + B} \times Cc$: and when the ſum of the products of the bodies on one ſide of IL multiplied by their diſtances from it, is equal to the ſum of the products of the bodies multiplied by their diſtances on the other ſide of IL, then Cc vaniſhes, or the common center of gravity of all the bodies falls on the right line IL.

Hence it is demonſtrable, that when any number of bodies move in right lines with uniform motions, their common center of gravity moves likewiſe in a right line with an uniform motion; and that the ſum of their motions eſtimated in any given direction, is preciſely the ſame as if all the bodies in one maſs were carried on with the direction and motion of their common center of gravity.

CENTER *of an hyperbola*, a point in the middle of the tranſverſe axis.

CENTER

CENTER *of magnitude*, of any homogeneal body, the ſame with the center of gravity. See the article CENTER *of gravity*.

CENTER *of motion*, that point which remains at reſt, while all the other parts of a body move about it. And this is the ſame in uniform bodies of the ſame matter throughout, as the center of gravity.

CENTER *of oſcillation*, that point in a pendulum in which, if the weight of the ſeveral parts thereof were collected, each vibration would be performed in the ſame time as when thoſe weights are ſeparate. This is the point from whence the length of a pendulum is meaſured, which in our latitude, in a pendulum that ſwings ſeconds, is 39 inches and $\frac{2}{10}$.

The center of ſuſpenſion is the point on which the pendulum hangs.

A general rule for finding the CENTER *of oſcillation*. If ſeveral bodies be fixed to an inflexible rod ſuſpended upon a point, and each body be multiplied by the ſquare of its diſtance from the point of ſuſpenſion, and then each body be multiplied by its diſtance from the ſame point; and all the former products when added together, be divided by all the latter products added together, the quotient which ſhall ariſe from thence, will be the diſtance of the center of oſcillation of theſe bodies from the ſaid point.

Thus, if C F (*ibid.* N° 8.) be a rod on which are fixed the bodies A, B, D, &c. at the ſeveral points A, B, D, &c. and if the body A be multiplied by the ſquare of the diſtance C A, and B be multiplied by the ſquare of the diſtance C B, and ſo on for the reſt: and then if the body A be multiplied by the diſtance C A, and B be multiplied by the diſtance C B, and ſo on for the reſt; and if the ſum of the products ariſing in the former caſe be divided by the ſum of thoſe which ariſe in the latter, the quotient will give C Q, the diſtance of the center of oſcillation of the bodies A, B, D, &c. from the point C. For the demonſtration of this rule, conſult the appendix to part I. of Mr. Rowning's ſyſtem of natural philoſophy.

To determine the center of oſcillation of the rectangle R I H S (*ibid.* N° 9.) ſuſpended in the middle point A of the ſide R I, and oſcillating about its axis R I. Let R I = S H = a, A P = x, then will P p, = dx and the element or the area, conſequently one weight = $a\,dx$ and its momentum $a\,x\,dx$. Wherefore $s\,a\,x^2\,dx : s\,a\,x\,dx = \frac{1}{3}\,a\,x^3 : \frac{1}{2}\,a\,x^2 = \frac{2}{3}\,x$, indefinitely expreſſes the diſtance of the center of oſcillation from the axis of oſcillation in the ſegment R C D I. If then for x be ſubſtituted the altitude of the whole rectangle R S = b, the diſtance of the center of oſcillation from the axis will be found = $\frac{2}{3}\,b$.

The center of oſcillation in an equicrural triangle S A H (*ibid.*) oſcillating about its axis R I, parallel to the baſe S H, is found at a diſtance from the vertex A equal to $\frac{3}{4}$ A E the altitude of the triangle.

The center of oſcillation in an equicrural triangle S A H (*ibid.*) oſcillating about its baſe S H, is found at a diſtance from the vertex A = $\frac{1}{2}$ A E.

For the centers of oſcillation of parabolas and curves of the like kind oſcillating about their axis parallel to their baſes, they are found as follows. In the apollonian parabola, the diſtance of the center of oſcillation from the axis = $\frac{5}{7}$ A E. (*ibid.*)

In the cubical paraboloid, the diſtance of the center from the axis = $\frac{7}{10}$ A E.

In a biquadratic paraboloid, the diſtance of the center from the axis = $\frac{9}{13}$ A E.

See more concerning the centers of oſcillation of triangles, cylinders, cones, &c. ſuſpended in different manners, and agitated laterally, in Wolfius's *elementa mechanicæ*, cap. x. ſect. 449, &c.

CENTER *of percuſſion*, in a moving body, that point wherein the percutient force is greateſt, or that point with which if the body ſtrikes againſt any obſtacle, no ſhock ſhall be felt at the point of ſuſpenſion. See the article PERCUSSION.

The center of percuſſion, when the percutient body revolves round a fixed point, is the ſame with the center of oſcillation, and conſequently may be determined by the ſame rule. See the article CENTER *of oſcillation*.

Hence a ſtick of a cylindrical figure, ſuppoſing the center of motion at the hand, will ſtrike the greateſt blow at a diſtance about two thirds of its length from the hand.

The center of percuſſion is the ſame with the center of gravity, if all the parts of the percutient body be carried with a parallel motion, or with the ſame celerity. For the momenta are the facta of the weights into the celerities; wherefore to multiply equiponderating bodies by the ſame velocity, is the ſame thing as to take equimultiples of them; but the equimultiples of equiponderating bodies, themſelves equiponderate. Therefore e-

equivalent momenta are diſpoſed about the center of gravity, and conſequently, the center of gravity in this caſe, will coincide with the center of percuſſion; and what is ſhewn of the one, will hold of the other.

CENTER *of converſion*, in mechanics, a term firſt uſed by Mr. Parent. It may be explained thus. If a ſtick be laid on ſtagnant water, and drawn by a thread faſtened to it, ſo that the thread always makes the ſame angle with the ſtick, *viz.* a right angle, the ſtick will be found to turn on one of its points, which will be unmovable, and this point is called the point of converſion.

This effect ariſes from the reſiſtance of the fluid; but the great queſtion conſiſts in knowing in what point the center of converſion is found. This Mr. Parent has calculated with a great deal of exactneſs, and finds if the ſtick drawn by one extremity be a ſtraight line divided into twenty parts, the center of converſion will be nearly on the thirteenth, reckoning from the thread. If it be not a line, but a ſurface or ſolid, there will be ſome change in the ſituation of the center of converſion, according to the nature of the ſurface or the ſolid.

CENTER *of a parallelogram*, or *polygon*, the point in which its diagonals interſect.

CENTER *of a ſphere*, a point in the middle, from which all lines drawn to the ſurface are equal.

Hermes Triſmegiſtus defines God an intellectual ſphere, whoſe center is every where, and circumference no where.

CENTERING *of an optic glaſs*, the grinding it ſo as that the thickeſt part is exactly in the middle.

One of the greateſt difficulties in grinding large optic glaſſes is, that in figures ſo little convex, the leaſt difference will put the center two or three inches out of the middle. Dr. Hook notes, that tho' it were better the thickeſt part of a long object glaſs were exactly in the middle, yet it may be a very good one when it is an inch or two out of it.

Mr. Caſſini the younger has a diſcourſe expreſs on the neceſſity of *well centering the object glaſs* of a large teleſcope, that is, of grinding them ſo, that the center may fall exactly in the axis of the teleſcope.

CENTESIMATION, a milder kind of military puniſhment, in caſes of deſertion, mutiny, and the like, when only every hundredth man is executed.

CENTIPES, in zoology, the name of two ſpecies of ſcolopendra, one called the white centipes, or the whitiſh ſcolopendra, with a depreſſed back; the other, the brown centipes, or the brown thin ſcolopendra. See the article SCOLOPENDRA.

CENTNER, among metallurgiſts and aſſayers, denotes a weight diviſible firſt into an hundred, and afterwards into other leſſer parts. However, it is to be obſerved, that the center of metallurgiſts, is the ſame with the common hundred weight; whereas that of aſſayers is no more than one dram, to which the other parts are proportional, and nevertheleſs paſs by the names 100 lb. 64 lb. 32 lb. *&c.*

CENTO, in poetry, a work wholly compoſed of verſes or paſſages, promiſcuouſly taken from other authors, only diſpoſed in a new form and order.

Proba Falconia has written his life of Jeſus Chriſt in centos, taken from Virgil; Alexr. Roſs has done the like in his chriſtiados, and Stephen de Pleure the ſame.

Auſonius has laid down rules to be obſerved in compoſing centos; the piece, ſays he, may be taken from the ſame poet, or from ſeveral, and the verſes may be either taken entire, or divided into two: one half to be connected with another half taken elſewhere; but two verſes are never to be uſed running, nor much leſs than half a verſe taken.

CENTONARII, in antiquity, certain officers of the roman army, who provided tents and other ſtuff, called centones, made uſe of to quench the fire which the enemy's engines threw into the camp.

Theſe centonarii kept with the carpenters and other officers of the artillery.

CENTRAL, ſomething relating to a center. See the article CENTER.

CENTRAL FORCES, the powers which cauſe a moving body to tend towards, or recede from, the center of motion.

If a body A (plate XXXIX. fig. 2. N° 1.) be ſuſpended at the end of a ſtring AC, moveable about a point C, as a center, and in that poſition it receives an impulſe in an horizontal direction, it will be thereby compelled to deſcribe a circle about the central point. While the circular motion continues, the body will certainly endeavour to recede from the center, which is called its centrifugal force, and ariſes from the horizontal impetus. With this force it acts upon the fixed center-pin, and that, by its immobility, re-acts with an equal force on the body, by means of the ſtring,

and

and ſolicits it towards the center of motion: whence it is called the centripetal force; and when we ſpeak of either or both indefinitely, they are called the central forces of the revolving body.

The theory of this ſpecies of motion, is compriſed in the following propoſitions.

1. When two or more bodies revolve at equal diſtances from the center of the circle they deſcribe, but with unequal velocities, the central forces, neceſſary to retain them, will be to each other as the ſquares of their velocities. That is, if one revolves twice as faſt as the other, it will require four times the retaining force the other does; if with three times the velocity, it will require nine times the force to retain it in its orb, &c.

2. When two or more bodies move with equal velocities, but at unequal diſtances from the center they revolve about, their central forces muſt be inverſely as their diſtances. That is, by how many times greater the diſtance a body revolves at, is from the center, ſo many times leſs force will retain it.

3. When two or more bodies perform their revolutions in equal times, but at different diſtances from the center they revolve about, the forces requiſite to retain them in their orbs, will be to each other as the diſtance they revolve at from the center: for inſtance, if one revolves at twice the diſtance the other does, it will require a double force to retain it, &c.

4. When two or more bodies revolving at different diſtances from the center, are retained by equal centripetal forces, their velocities will be ſuch, that their periodical times will be to each other, as the ſquare roots of their diſtances. That is, if one revolves at four times the diſtance another does, it will perform a revolution in twice the time that the other does; if at nine times the diſtance, it will revolve in thrice the time.

5. And, in general, whatever be the diſtances, the velocities, or the periodical times of the revolving bodies, the retaining forces will be to each other in a ratio compounded of their diſtances directly, and the ſquares of their periodical times inverſely. Thus, for inſtance, if one revolves at twice the diſtance another does, and is three times as long in moving round, it will require two ninths, that is, two ninths of the retaining power the other does.

6. If ſeveral bodies revolve at different diſtances from one common center, and the retaining power lodged in that center decreaſe as the ſquares of the diſtances increaſe, the ſquares of the periodical times of theſe bodies will be to each other as the cubes of their diſtances from the common center. That is, if there be two bodies whoſe diſtances, when cubed, are double or treble, &c. of each other, then the periodical times will be ſuch, as that when ſquared only, they ſhall alſo be double or treble, &c.

7. If a body be turned out of its rectilineal courſe, by virtue of a central force, which decreaſes as you go from the ſeat thereof, as the ſquares of the diſtances increaſe; that is, which is inverſely as the ſquare of the diſtance, the figure that body ſhall deſcribe, if not a circle, will be a parabola, an ellipſis, or an hyperbola; and one of the foci of the figure will be at the ſeat of the retaining power. That is, if there be not that exact adjuſtment between the projectile force of the body and the central power neceſſary to cauſe it to deſcribe a circle, it will then deſcribe one of thoſe other figures, one of whoſe foci will be where the ſeat of the retaining power is.

8. If the force of the central power decreaſes as the ſquare of the diſtance increaſes, and ſeveral bodies revolving about the ſame deſcribe orbits that are elliptical, the ſquares of the periodical times of theſe bodies will be to each other, as the cubes of their middle diſtances from the ſeat of that power.

9. If the retaining power decreaſe ſomething faſter as you go from the ſeat thereof, (or which is the ſame thing, increaſe ſomething faſter as you come towards it) than in the proportion mentioned in the laſt propoſition, and the orbit the revolving body deſcribes be not a circle, the axis of that figure will turn the ſame way the body revolves: but if the ſaid power decreaſe (or increaſe) ſomewhat ſlower than in that proportion, the axis of the figure will turn the contrary way. Thus, if a revolving body, as D (plate XXXIX. fig. 2. N° 2.) paſſing from A towards B deſcribe the figure ADB, whoſe Axis AB, at firſt points as in the figure, and the power whereby it is retained decreaſe faſter than the ſquare of the diſtance increaſes, after a number of revolutions, the axis of the figure will point towards P, and after that towards R, &c. revolving round the ſame way with the body; and if the retaining power de-

quivalent momenta are diſpoſed about the center of gravity, and conſequently, the center of gravity in this caſe, will coincide with the center of percuſſion; and what is ſhewn of the one, will hold of the other.

CENTER *of converſion*, in mechanics, a term firſt uſed by Mr. Parent. It may be explained thus. If a ſtick be laid on ſtagnant water, and drawn by a thread faſtened to it, ſo that the thread always makes the ſame angle with the ſtick, *viz.* a right angle, the ſtick will be found to turn on one of its points, which will be unmovable, and this point is called the point of converſion.

This effect ariſes from the reſiſtance of the fluid; but the great queſtion conſiſts in knowing in what point the center of converſion is found. This Mr. Parent has calculated with a great deal of exactneſs, and finds if the ſtick drawn by one extremity be a ſtraight line divided into twenty parts, the center of converſion will be nearly on the thirteenth, reckoning from the thread. If it be not a line, but a ſurface or ſolid, there will be ſome change in the ſituation of the center of converſion, according to the nature of the ſurface or the ſolid.

CENTER *of a parallelogram*, or *polygon*, the point in which its diagonals interſect.

CENTER *of a ſphere*, a point in the middle, from which all lines drawn to the ſurface are equal.

Hermes Triſmegiſtus defines God an intellectual ſphere, whoſe center is every where, and circumference no where.

CENTERING *of an optic glaſs*, the grinding it ſo as that the thickeſt part is exactly in the middle.

One of the greateſt difficulties in grinding large optic glaſſes is, that in figures ſo little convex, the leaſt difference will put the center two or three inches out of the middle. Dr. Hook notes, that tho' it were better the thickeſt part of a long object glaſs were exactly in the middle, yet it may be a very good one when it is an inch or two out of it.

Mr. Caſſini the younger has a diſcourſe expreſs on the neceſſity of *well centering the object glaſs* of a large teleſcope, that is, of grinding them ſo, that the center may fall exactly in the axis of the teleſcope.

CENTESIMATION, a milder kind of military puniſhment, in caſes of deſertion, mutiny, and the like, when only every hundredth man is executed.

CENTIPES, in zoology, the name of two ſpecies of ſcolopendra, one called the white centipes, or the whitiſh ſcolopendra, with a depreſſed back; the other, the brown centipes, or the brown thin ſcolopendra. See the article SCOLOPENDRA.

CENTNER, among metallurgiſts and aſſayers, denotes a weight diviſible firſt into an hundred, and afterwards into other leſſer parts. However, it is to be obſerved, that the center of metallurgiſts, is the ſame with the common hundred weight; whereas that of aſſayers is no more than one dram, to which the other parts are proportional, and nevertheleſs paſs by the names 100 lb. 64 lb. 32 lb. *&c.*

CENTO, in poetry, a work wholly compoſed of verſes or paſſages, promiſcuouſly taken from other authors, only diſpoſed in a new form and order.

Proba Falconia has written his life of Jeſus Chriſt in centos, taken from Virgil; Alexr. Roſs has done the like in his chriſtiados, and Stephen de Pleure the ſame.

Auſonius has laid down rules to be obſerved in compoſing centos; the piece, ſays he, may be taken from the ſame poet, or from ſeveral, and the verſes may be either taken entire, or divided into two: one half to be connected with another half taken elſewhere; but two verſes are never to be uſed running, nor much leſs than half a verſe taken.

CENTONARII, in antiquity, certain officers of the roman army, who provided tents and other ſtuff, called centones, made uſe of to quench the fire which the enemy's engines threw into the camp.

Theſe centonarii kept with the carpenters and other officers of the artillery.

CENTRAL, ſomething relating to a center. See the article CENTER.

CENTRAL FORCES, the powers which cauſe a moving body to tend towards, or recede from, the center of motion.

If a body A (plate XXXIX. fig. 2. N° 1.) be ſuſpended at the end of a ſtring A C, moveable about a point C, as a center, and in that poſition it receives an impulſe in an horizontal direction, it will be thereby compelled to deſcribe a circle about the central point. While the circular motion continues, the body will certainly endeavour to recede from the center, which is called its centrifugal force, and ariſes from the horizontal impetus. With this force it acts upon the fixed center-pin, and that, by its immobility, re-acts with an equal force on the body, by means of the ſtring, and

and ſolicits it towards the center of motion: whence it is called the centripetal force; and when we ſpeak of either or both indefinitely, they are called the central forces of the revolving body.

The theory of this ſpecies of motion, is compriſed in the following propoſitions.

1. When two or more bodies revolve at equal diſtances from the center of the circle they deſcribe, but with unequal velocities, the central forces, neceſſary to retain them, will be to each other as the ſquares of their velocities. That is, if one revolves twice as faſt as the other, it will require four times the retaining force the other does; if with three times the velocity, it will require nine times the force to retain it in its orb, &c.

2. When two or more bodies move with equal velocities, but at unequal diſtances from the center they revolve about, their central forces muſt be inverſely as their diſtances. That is, by how many times greater the diſtance a body revolves at, is from the center, ſo many times leſs force will retain it.

3. When two or more bodies perform their revolutions in equal times, but at different diſtances from the center they revolve about, the forces requiſite to retain them in their orbs, will be to each other as the diſtance they revolve at from the center: for inſtance, if one revolves at twice the diſtance the other does, it will require a double force to retain it, &c.

4. When two or more bodies revolving at different diſtances from the center, are retained by equal centripetal forces, their velocities will be ſuch, that their periodical times will be to each other, as the ſquare roots of their diſtances. That is, if one revolves at four times the diſtance another does, it will perform a revolution in twice the time that the other does; if at nine times the diſtance, it will revolve in thrice the time.

5. And, in general, whatever be the diſtances, the velocities, or the periodical times of the revolving bodies, the retaining forces will be to each other in a ratio compounded of their diſtances directly, and the ſquares of their periodical times inverſely. Thus, for inſtance, if one revolves at twice the diſtance another does, and is three times as long in moving round, it will require two ninths, that is, two ninths of the retaining power the other does.

6. If ſeveral bodies revolve at different diſtances from one common center, and the retaining power lodged in that center decreaſe as the ſquares of the diſtances increaſe, the ſquares of the periodical times of theſe bodies will be to each other as the cubes of their diſtances from the common center. That is, if there be two bodies whoſe diſtances, when cubed, are double or treble, &c. of each other, then the periodical times will be ſuch, as that when ſquared only, they ſhall alſo be double or treble, &c.

7. If a body be turned out of its rectilineal courſe, by virtue of a central force, which decreaſes as you go from the ſeat thereof, as the ſquares of the diſtances increaſe; that is, which is inverſely as the ſquare of the diſtance, the figure that body ſhall deſcribe, if not a circle, will be a parabola, an ellipſis, or an hyperbola; and one of the foci of the figure, will be at the ſeat of the retaining power. That is, if there be not that exact adjuſtment between the projectile force of the body and the central power neceſſary to cauſe it to deſcribe a circle, it will then deſcribe one of thoſe other figures, one of whoſe foci will be where the ſeat of the retaining power is.

8. If the force of the central power decreaſes as the ſquare of the diſtance increaſes, and ſeveral bodies revolving about the ſame deſcribe orbits that are elliptical, the ſquares of the periodical times of theſe bodies will be to each other, as the cubes of their middle diſtances from the ſeat of that power.

9. If the retaining power decreaſe ſomething faſter as you go from the ſeat thereof, (or which is the ſame thing, increaſe ſomething faſter as you come towards it) than in the proportion mentioned in the laſt propoſition, and the orbit the revolving body deſcribes be not a circle, the axis of that figure will turn the ſame way the body revolves: but if the ſaid power decreaſe (or increaſe) ſomewhat ſlower than in that proportion, the axis of the figure will turn the contrary way. Thus, if a revolving body, as D (plate XXXIX. fig. 2. N° 2.) paſſing from A towards B deſcribe the figure ADB, whoſe Axis AB, at firſt points as in the figure, and the power whereby it is retained decreaſe faſter than the ſquare of the diſtance increaſes, after a number of revolutions, the axis of the figure will point towards P, and after that towards R, &c. revolving round the ſame way with the body; and if the retaining power de-

creaſe ſlower than in that proportion, the axis will turn the other way.

Thus it is the heavenly bodies, *viz.* the planets, both primary and ſecondary, and alſo the comets, perform their reſpective revolutions. The figures in which the primary planets and the comets revolve, are ellipſes, one of whoſe foci is at the ſun: the areas they deſcribe, by lines drawn to the center of the ſun, are in each proportional to the times in which they are deſcribed. The ſquares of their periodical times, are as the cubes of their middle diſtances from the ſun. The ſecondary planets deſcribe alſo circles or ellipſes, one of whoſe foci is in the center of their primary ones, *&c.*

CENTRAL RULE, a rule diſcovered by Mr. Thomas Baker, whereby to find the center of a circle deſigned to cut the parabola in as many points, as an equation to be conſtructed hath real roots. Its principal uſe is in the conſtruction of equations, and he has applied it with good ſucceſs as far as biquadratics.

The central rule is chiefly founded on this property of the parabola, that if a line be inſcribed in that curve perpendicular to any diameter, a rectangle formed of the ſegments of the inſcript, is equal to the rectangle of the intercepted diameter and parameter of the axis.

The central rule has the advantage over Cartes and De Latere's methods of conſtructing equations, in that both theſe are ſubject to the trouble of preparing the equation, by taking away the ſecond term.

CENTRIFUGAL FORCE, that force by which all bodies that move round any other body in a curve, endeavour to fly off from the axis of their motion in a tangent to the periphery of the curve, and that in every point of it.

Mr. Huygens demonſtrates, that this force is always proportional to the circumference of the curve in which the revolving body is carried round. The centrifugal force of any body is to the centripetal, as the ſquare of the arch which a body deſcribes in a given time, divided by the diameter, to the ſpace thro' which a heavy body moves in falling from a place where it was at reſt in the ſame time.

If any body ſwim in a medium heavier than itſelf, the centrifugal force is the difference between the ſpecific weight of the medium, and the floating body.

All moving bodies endeavour after a rectilinear motion, becauſe it is the eaſieſt, ſhorteſt, and moſt ſimple: whenever therefore they move in any curve, there muſt be ſomething that draws them from their rectilinear motion, and detains them in their orbits; and were that force to ceaſe, the moving body would go ſtraight off in a tangent to the curve in that very point, and ſo would get ſtill further and further from the focus, or center of its curvilinear motion.

It may be, that in a curve where the force of gravity in the deſcribing body is continually variable, the centrifugal force may alſo continually vary in the ſame manner, and ſo that one may alſo ſupply the defect, or abate for the exceſs of the other, and conſequently the effect be every where equal to the abſolute gravity of the revolving body.

CENTRINA, or CENTRINE, in ichthyology, the name by which authors call a ſpecies of ſqualus, without any tail-fin, and its body of a trigonal ſhape.

CENTRIPETAL FORCE, that force by which a body is every where impelled, or any how tends towards ſome point as a center; ſuch is gravity, or that force whereby bodies tend towards the center of the earth; magnetical attraction, whereby the load-ſtone draws iron; and that force, whatever it be, whereby the planets are continually drawn back from right-lined motions, and made to move in curves.

The greater the quantity of matter in any body is, the greater will be its centripetal force, all things elſe alike. If a body laid upon a plane, revolve at the ſame time, and about the ſame center with that plane, and ſo deſcribe a circle; and if the centripetal force, wherewith the body is drawn every moment towards the center, ſhould ceaſe to act, and the plane ſhould continue to move with the ſame velocity, the body will begin to recede from the center about which the plane moved. See CENTRAL FORCES.

CENTRO-BARYC METHOD, in mechanics, the method of determining the content of a ſuperficies, or ſolid, by means of the center of gravity.

CENTRONIA, in zoology, the name by which Dr. Hill calls the echinus marinus, or ſea-hedge-hog, or ſea-egg; which he deſnes to be an animal living under the defence of a ſhelly covering, formed of one piece, and furniſhed with a vaſt number of ſpines, moveable at the animal's pleaſure.

These animals conſtitute a diſtinct genus by themſelves, the ſpecies of which are very numerous, and ſome of them extremely elegant: 1. The centronia with variolated papillæ. 2. The common round centronia, with ſmall papillæ. 3. The ſea-apple. 4. The high-backed cordated centronia, called ſpatangus, or ſpatagoides, by authors. 5. The round flat centronia, called placenta: with a great many other ſpecies. See plate XXXIX. fig. 3. where n° 1. repreſents the variolated centronia, and n° 2, the common centronia.

CENTRUM, in geomery and mechanics, the ſame with center. See the article CENTER.

CENTRUM PHONICUM, in acouſtics, the place where the ſpeaker ſtands, in polyſyllabic and articulate echoes.

CENTRUM PHONO-CAMPTICUM, the object or place that returns the voice in an echo. See the article ECHO.

Blancanus writes, that no ſyllable can be diſtinctly and clearly returned, under the diſtance of twenty-four geometrical paces.

CENTRUM TENDINOSUM, in anatomy, a point wherein the tendons of the muſcles of the diaphragm meet.

This center is perforated towards the right ſide, for the vena cava; and the deſcending trunk of the great artery, the thoracic duct, and azygos vena paſs between its two inferior proceſſes.

CENTRY-BOX, the ſame with the guerritte, only the former is of wood, and the other of ſtone. It is a wooden cell, or lodge, to ſhelter the centinel, or centry, from the injuries of the weather.

In a fortification, they are uſually placed on the flanked angles of the baſtions, on thoſe of the ſhoulder, and ſometimes in the middle of the curtain.

CENTUMVIRI, in roman antiquity, judges appointed to decide common cauſes among the people; they were choſen three out of each tribe; and though five more than an hundred, were nevertheleſs called centumviri, from the round number centum, an hundred.

CENTUNCULUS, in botany, a genus of the tetrandria-monogynia claſs of plants; the flower of which is monopetalous, the tube is globoſe, and the limb divided into four oval ſegments: the fruit is an unilocular capſule, containing a great number of roundiſh ſeeds.

CENTURION, among the Romans, an officer in the infantry, who commanded a century, or an hundred men.

The centurions held the firſt rank in the firſt cohort of a legion, and two of them the place of the two firſt haſtati, or pikemen: the firſt among the principes was alſo a centurion.

The centurion primipilus was the chief of the centurions: he was not under the command of any tribune, as all the reſt were; he had four centuries under his direction, and guarded the ſtandard and the eagle of the legion.

CENTURY, in a general ſenſe, any thing divided into or conſiſting of an hundred parts.

The roman people, when they were aſſembled for the electing of magiſtrates; enacting of laws, or deliberating upon any public affair, were always divided into centuries; and voted by centuries, in order that their ſuffrages might be the more eaſily collected; whence theſe aſſemblies were called *comitia centuriata*. The roman cohorts were alſo divided into centuries. See the articles CENTURION and COHORT.

CENTURY, in chronology, the ſpace of one hundred years.

This method of computing by centuries is generally obſerved in church-hiſtory, commencing from the time of our Saviour's incarnation; in which ſenſe we ſay the firſt century, the ſecond century, &c.

CENTURIES *of Magdeburg*, a famous eccleſiaſtical hiſtory, ranged into thirteen centuries, carried down to the year 1298, compiled by ſeveral hundred proteſtants of Magdeburg, the chief of whom was Matthias Flacius Illyricus.

CENTUSSIS, in roman antiquity, a coin containing an hundred aſſes.

CENU, a town of Terra Firma, in South America, about eighty miles ſouth of Carthagena; weſt longitude 76°, and north latitude 9°.

CEPA, the ONION, in botany, a ſpecies of allium. See the article ALLIUM.

Onions are much eaten, and it would be well if they were more ſo: they attenuate tough and viſcous humours, cleanſe the ſtomach, and excite an appetite; they are a very powerful diuretic, but when eaten too largely, they have bad effects. A ſyrup of onions, made from a ſtrong decoction of them, with honey, is an excellent medicine in aſthmas of the moiſt kind, in diſorders of the breaſt, &c. A cataplaſm of roaſted onions and butter is an excellent external application for the piles, &c.

CEPHA-

CEPHALALGIA, a term uſed to denote the head-ach. See HEAD-ACH.

CEPHALANTHUS, in botany, a genus of the tetrandria-monogynia claſs of plants; the corolla conſiſts of a ſingle petal; the tube is ſlender; the limb is divided into four parts, acute, reflex, and of the length of the tube; the fruit is an oblong capſule, containing only one cell; ſeveral of theſe grow together, and form a roundiſh head; the ſeeds are numerous and oblong.

CEPHALIC, in a general meaning, ſignifies any thing belonging to the head, or its parts.

CEPHALIC MEDICINES are remedies for diſorders of the head.

Under this denomination are comprehended all thoſe medicines which have a particular relation to the brain; ſo that cephalic remedies, in general, are ſuch as promote the ſecretion and diſtribution of the ſpirits, and are commonly of a volatile, ſpirituous, and aromatic nature.

CEPHALIC VEIN, in anatomy, creeps along the arm, between the ſkin and the muſcles, and divides itſelf into two branches; the external goes down to the wriſt, where it joins the baſilica, and turns up to the back of the hand: the internal branch, together with a ſmall one of the baſilica, makes the mediana.

The antients uſed to open this vein for diſorders of the head, from which it bears this name; but a better acquaintance with the circulation of the blood informs us, that there is no foundation for ſuch a practice.

CEPHALONIA, the capital of an iſland of the ſame name, ſituated in the Mediterranean, near the coaſt of Epirus, and ſubject to the Venetians; eaſt long. 21°, and north lat. 38° 30′.

CEPHALOPHARYNGÆI, in anatomy, the firſt pair of muſcles of the upper part of the gullet, which proceed from beſide the head and neck, and are ſpread more largely upon the tunic of the gullet.

Theſe muſcles ariſe from that part where the head is joined to the firſt vertebra of the neck, from whence marching downwards, they ſpread about the pharynx, with a large plexus of fibres, and ſeem to make its membrane: this ſtreightens the throat in ſwallowing.

CEPHEUS, in aſtronomy, a conſtellation of the northern hemiſphere, whoſe ſtars, in Ptolemy's catalogue, are thirteen; in Tycho's, eleven; in Hevelius's, forty; and in Mr. Flamſtead's, thirty-five.

CEPI CORPUS, in law, a return made by the ſheriff, that, upon a capias, or other like proceſs, he has taken the defendant's body.

CEPPHUS, in ornithology, a bird of the gull-kind, not unlike the common duck, excepting its feet and beak. See plate XL. fig. 1. and the article LARUS.

CERAM, an iſland in the indian ocean, between the Molucca-iſlands on the north, and thoſe of Amboyna and Banda on the ſouth, lying between 126° and 129° eaſt longitude, and in 3° ſouth lat. It is about one hundred and fifty miles long, and ſixty broad; and here the Dutch have a fortreſs, which keeps the natives in ſubjection.

CERAMBYX, in zoology, a genus of beetles, the characters of which are theſe: the antennæ are long and ſetaceous; and the thorax is oblong, rounded, and mucronated or pointed at each extremity.

Under this genus is comprehended the capricorn-beetle, and a number of other ſpecies.

CERASTIUM, in botany, a genus of the decandria-pentagynia claſs of plants, the flower of which conſiſts of five bifid petals; and its fruit is a very long unilocular pod, containing numerous roundiſh ſeeds.

CERASUS, the CHERRY-TREE, in botany, a ſpecies of prunus. See the article PRUNUS.

All the ſorts of cherries which are uſually cultivated in fruit-gardens, are propagated by budding, or grafting the ſeveral kinds into ſtocks of the black or wild red cherries, which are ſtrong ſhooters, and of a longer duration than any of the garden-kinds.

CERATE, in pharmacy, a medicine uſed externally in ſeveral diſeaſes, eſpecially thoſe of the ſkin. It is generally of four ſorts, the white cerate, the yellow cerate, the cicatrizing cerate, and the mercurial cerate.

To prepare the white cerate: take of olive-oil four ounces in meaſure, of white wax four ounces in weight, of ſpermaceti half an ounce in weight: melt all together, and ſtir them well, till the cerate is quite cold.

For the yellow: take of yellow baſilicon half a pound, of yellow wax an ounce: melt them together.

To prepare the cicatrizing cerate; take of olive-oil a pound; yellow wax, prepared calamy, of each half a pound; melt the wax with the oil, and as ſoon as the mixture

ture begins to congeal, ſprinkle in the calamy, and ſtir all well, till the cerate is quite cold.

To prepare the mercurial cerate; take yellow wax, tried hog's lard, of each half a pound; of quick-ſilver three ounces; of the ſimple balſam of ſulphur, a dram: melt the wax with the lard, then add them gradually to the quick-ſilver, firſt well divided by the balſam of ſulphur.

CERATION, the name given by the antients to the ſmall ſeeds of the ceratonia, or ſiliqua, of botaniſts, uſed by the arabian phyſicians, as a weight to adjuſt the doſes of medicines; as the grain weight with us took its riſe from a grain of barley.

This was alſo the name of a ſilver coin, equal to one third of an obolus.

CERATION, *ceratio*, in chemiſtry. See the article WAXING.

CERATOGLOSSUM, in anatomy, the name of a pair of muſcles, ſerving to draw the tongue directly into the mouth; but if only one of them acts, it draws the tongue to one ſide of the mouth.

CERATONIA, CAROB TREE, in botany, a genus of the dioecia pentandria claſs of plants: there is no corolla of either male or female: the calyx of the male flower is divided into five parts; the calyx of the female flower has five tubercles; the fruit is a legumen, or pod, divided by ſeveral ſepta; the ſeed is ſolitary, roundiſh, compreſſed, hard, and ſhining.

CERATOPHYLLUM, in botany, a genus of the monoecia-polyandria claſs of plants: there is no corolla; the calyx of the male flower is divided into ſeveral ſegments, as is that of the female flower: there is no pericarpium; the ſeed is an ovato-acuminated nut, containing only one cell.

CERBERA, in botany, a genus of the pentandria-monogynia claſs of plants, the corolla of which conſiſts of a ſingle funnel-ſhaped petal; the tube is elevated, the limb large, and divided into five ſegments: the fruit is a large, round, fleſhy drupe, marked with a longitudinal furrow on the ſide, and containing two cells, in each of which is a ſingle ſeed, being a nut of an oval figure.

CERCELE, in heraldry. A croſs cercele is a croſs which opening at the ends, turns round both ways, like a ram's horn. See the article CROSS.

CERCIS, in botany, a genus of the decandria-monogynia claſs of plants: the corolla conſiſts of five petals, inſerted into the calyx, and greatly reſembles a papilionaceous flower: the fruit is an oblong, obliquely acuminated legumen, having only one cell; the ſeeds are few, roundiſh, and annexed to the upper future.

CERCOPITHECUS, in zoology, an appellation given to all the long-tailed monkeys; from κερκος, a tail, and πιθηκος, monkey. See SIMIA and MONKEY.

CERDONIANS, in church hiſtory, antient heretics, who maintained moſt of the errors of Simon Magus, Saturnel, and other gnoſtics.

They aſſerted two principles, the one good, and the other evil: this laſt, according to them, was creator of the world, and the God that appeared under the old law: the firſt, whom they called unknown, was the father of Jeſus Chriſt, who, they taught, was only incarnate in appearance, and was not born of a virgin, nor ſuffered death, but in appearance.

CEREALIA, in antiquity, feaſts of Ceres, inſtituted by Triptolemus of Eleuſis, in Attica.

Theſe feaſts were celebrated with ſuch religious purity, that any one's lying with his wife was accounted pollution. It was not Ceres alone that was honoured here, but alſo Bacchus: the victims offered were hogs, by reaſon of the waſte they made in the product of the earth.

The cerealia paſſed from the Greeks to the Romans, who held them for eight days ſucceſſively, commencing on the 12th of April. It was the women alone who were concerned in the celebrations, all dreſſed in white; the men were only ſpectators: they eat nothing till ſun ſet, in memory of Ceres, who, in her ſearch after her daughter, took no repaſt but in the evening; there were exhibited combats on horſeback, though theſe were afterwards changed into combats of gladiators.

CEREBELLUM, in anatomy, the hinder part of the brain. See the article BRAIN.

The cerebellum is ſituated under the poſterior lobes of the brain, and the hinder proceſſes of the dura mater, in the lower part of the cavity of the ſkull; its figure approaches to a globular one; its ſuperficies is leſs anfractuous or gyrated than that of the brain; but it is furrowed; the furrows are deepeſt and largeſt in the middle, and from thence they gradually grow ſmaller every way, in form of ſo many ſegments of circles, till by degrees they

they terminate in what is called the vermiform proceſs.

The ſubſtance of the cerebellum, if cut into the right and left parts, appears much the ſame with that of the brain; but the cortical part is here much more in quantity than the medullary, which, in a very elegant manner, reſembles a kind of ſhrubs, or little trees, the trunks of which form what are called the peduncles of the cerebellum. Though the brain has its ſeveral cavities, the cerebellum has none. The lobules of the cerebellum adhere in cluſters to the arbuſculi medullares: they are ſurrounded by the pia mater, and compoſe the far greater part of the cerebellum.

The peduncles of the cerebellum conſiſt of the medullary proceſſes; the firſt aſcends from the cerebellum towards the teſtes, and forms what is called the valvula magna of the brain; the ſecond forms the annular prominence of Willis; and the third deſcends to the ſpinal narrow.

CEREBRUM, in anatomy, denotes the brain. See the article BRAIN.

CEREBRUM JOVIS, in ichthyology, a name given by the poet Ennius to a ſpecies of labrus, called by the generality of writers ſcarus.

CEREMONIAL, in a general ſenſe, ſomething belonging to, or partaking of the nature of ceremonies; thus we ſay, the ceremonial law, the ceremonial of princes, *&c.*

The ceremonial law is peculiarly uſed for the law of Moſes, in contradiſtinction to the moral law; and though wholly taken up about the externals of religion, as rites, ceremonies, ſacred utenſils, *&c.* yet ſo blindly have the ſuperſtitious Jews been devoted to it at all times, as to prefer the obſervance of it to that of the moral law itſelf; whereas the chriſtian religion teaches us that the chief of theſe ceremonies, the ſabbath, was made for man's uſe, not man for the ſabbath.

CEREMONY, *ceremonia*, an aſſemblage of ſeveral actions, forms, and circumſtances, ſerving to render a thing more magnificent and ſolemn; particularly uſed to denote the external rites of religious worſhip, the formalities of introducing ambaſſadors to audiences, *&c.* Judaiſm has ever been a ſource of ceremonies; the Jews even now look upon them as a peculiar bleſſing from God to their nation, and a prerogative of their religion above all others in the world; they admit, however, that it is not abſolutely neceſſary to the attainment of eternal life to obſerve them all; it being impracticable for them, whilſt without a temple, and without ſacrifices, to keep a great many of them. Paganiſm has not been behind hand with judaiſm in point of ceremony; ſo that ceremony may in ſome meaſure be ſtiled the eſſence of both theſe religions. It is ſurpriſing that chriſtianity, whoſe principles are the moſt plain and ſimple, ſhould load itſelf with ſo cumberſome a train, that thoſe very people who are obliged to ſupport it, cannot acquit themſelves without infinite fatigue and trouble.

Maſter of the CEREMONIES, an officer inſtituted by king James I. for the more honourable reception of ambaſſadors and ſtrangers of quality; he wears about his neck a chain of gold, with a medal under the crown of Great Britain, having on one ſide an emblem of peace, with this motto, BEATI PACIFICI; and on the other, an emblem of war, with DIEU ET MON DROIT; his ſalary is three hundred pounds *per annum*.

Aſſiſtant maſter of the CEREMONIES is to execute the employment in all points, whenſoever the maſter of the ceremonies is abſent. His ſalary is one hundred and forty-one pounds, thirteen ſhillings, and four pence *per annum*.

Marſhal of the CEREMONIES is their officer, being ſubordinate to them both. His ſalary is one hundred pounds *per annum*.

Maſters of the CEREMONIES *to the pope*. Of theſe there are ſix, whereof two are called aſſiſtants, and the other four ſupernumeraries; the two aſſiſtants receive of every new cardinal two hundred and twenty-four crowns of gold, and of the heirs of thoſe who die, an hundred crowns; beſides this, their employments bring them in ſeven hundred crowns. The four ſupernumeraries receive forty-eight crowns of gold a-piece from every new-created cardinal, and four hundred crowns from the apoſtolical college. They have an equal authority to regulate all pontifical functions, acquaint the cardinals with their duty, and iſſue orders to all perſons belonging to the court.

CERIGO, or CYTHEREA, in geography, an iſland of the Archipelago, on the eaſtern coaſt of the Morea, and fifty miles north of the iſland of Candia.

It is a mountainous country, between forty and fifty miles in circumference, and ſituated in eaſt longitude 23° 40′, and north latitude 36°.

CE-

CERINTHE, HONEY-WORT, in botany, a genus of the pentandria-monogynia claſs of plants, the flower of which conſiſts of a ſingle petal; the tube is ſhort and thick; the limb is thicker than the tube, and ſomewhat bellied; it is divided into five ſegments, and the mouth is open and pervious; the fruit conſiſts of two hard oſſeous bodies, of an oval figure, gibbous on the outſide, plane within, acute, emarginated, and containing two cells; the ſeeds are ſingle, roundiſh, and accuminated.

CERINTHIANS, in church-hiſtory, chriſtian heretics, followers of Cerinthus, who lived and publiſhed his hereſy in the time of the apoſtles themſelves; they did not allow that God was the author of the creatures, but ſaid, that the world was created by an inferior power; they attributed to this creator an only ſon, but born in time, and different from the world; they admitted ſeveral angels and inferior powers, they maintained that the law and the prophets came not from God, but from the angels; and that the God of the Jews was only an angel; they diſtinguiſhed between Jeſus and Chriſt, and ſaid, that Jeſus was a mere man, born, like other men, of Joſeph and Mary; but that he excelled all other men in prudence and wiſdom; that Jeſus being baptiſed, the Chriſt of the ſupreme God, that is, the Holy Ghoſt, deſcended upon him; and that by the aſſiſtance of this Chriſt, Jeſus performed his miracles. It was partly to refute this ſect that St. John wrote his goſpel.

CEROMA, κηρωμα, an ointment made up of oil and wax, with which the antient wreſtlers rubbed themſelves, not only to make their limbs more ſleek, and leſs capable to be laid hold on, but alſo more pliable and fit for exerciſe.

CEROPEGIA, in botany, a genus of the pentandria-monogynia claſs of plants, whoſe flower conſiſts of a ſingle petal; the tube is cylindraceous, oblong, and terminating with a long globoſe baſe; the limb is ſmall, and divided into five ſegments; the fruit is two cylindraceous accuminated floſcules, containing one cell, and divided by two valves; the ſeeds are numerous, imbricated, and oblong.

CERTAINTY, or CERTITUDE. See the the article CERTITUDE.

CERTHIA, the CREEPER, in ornithology, a ſpecies of Iſpida, with a yellowiſh brown back, variegated with white, and a white breaſt. See the article ISPIDA.

This is a very ſingular little bird, brought into the genus of the Iſpida by the ſtructure of its feet, being not very unlike the common Kingfiſher in ſize, form, and every other obvious particular. It is an extremely ſmall bird, being hardly bigger than a wren.

CERTIFICANDO DE RECOGNITIONE STAPULÆ, a writ iſſued to the mayor of the ſtaple, commanding him to certify to the lord chancellor a ſtatute-ſtaple taken before him, where the party refuſes to bring it.

CERTIFICATE, in law, a writing made in any court, to give notice to another court of any thing done therein. The clerks of the crown, aſſize, and the peace, are to make certificates into the king's bench of the tenor of all indictments, convictions, outlawries, &c.

CERTIFICATION *of aſſize of novel diſſeiſin*, a writ granted for the re-examining paſſed-by aſſiſes before juſtices. This writ is uſed where a perſon appears by his bailiff to an aſſiſe, brought by another, and has loſt the day.

CERTIORARI, a writ which iſſues out of the chancery, directed to an inferior court, to call up the records of a cauſe there depending, in order that juſtice may be done. And this writ is obtained upon complaint, that the party who ſeeks it has received hard uſage, or is not like to have an impartial trial in the inferior court. A certiorari is made returnable either in the king's bench, common pleas, or in chancery.

It is not only iſſued out of the court of chancery, but likewiſe out of the king's bench, in which laſt mentioned court it lies where the king would be certified for a record. Indictments from inferior courts, and proceedings of the quarter ſeſſions of the peace may alſo be removed into the king's bench by a certiorari; and here the very record muſt be returned, and not a tranſcript of it; though uſually in chancery, if a certiorari be returnable there, it removes only a tenor of the record.

CERTITUDE, conſidered in the things or ideas which are the objects of our underſtanding, is a neceſſary agreement, or diſagreement of one part of our knowledge with another: as applied to the mind, it is the perception of ſuch agreement or diſagreement; or ſuch a firm well-grounded aſſent, as excludes not only all manner of doubt, but all conceivable poſſibility of a miſtake.

There are three ſorts of certitude, or aſſurance, according to the different natures and circumſtances of things.

1. A phyſical or natural certitude, which depends upon the evidence of ſenſe; as that I ſee ſuch or ſuch a colour, or hear ſuch or ſuch a ſound: no body queſtions the truth of this, where the organs, the medium, and the object are rightly diſpoſed. 2. Mathematical certitude is that ariſing from mathematical evidence; ſuch is, that the three angles of a triangle are equal to two right ones. 3. Moral certitude is that founded on moral evidence, and is frequently equivalent to a mathematical one, as that there was formerly ſuch an emperor as Julius Cæſar, and that he wrote the Commentaries which paſs under his name; becauſe the hiſtorians of theſe times have recorded it, and no man has ever diſproved it ſince: this affords a moral certitude, in common ſenſe ſo great, that one would be thought a fool or a madman for denying it.

CERT-MONEY, a fine paid yearly by the reſidents of ſeveral manors, to the lord thereof, and ſometimes to the hundred, *pro certo lete*, that is, for the certain keeping of the leet.

CERVIA, in geography, a city and port-town of Romania, in Italy, ſituated on the gulph of Venice, about ten miles ſouth-eaſt of Ravenna, and ſubject to the pope: eaſt long. 13°, and north lat. 44° 30′.

CERVICAL NERVES, in anatomy, are eight pair of nerves, ſo called as having their origin in the neck. See NERVES.

From theſe eight pair there are innumerable branches diſtributed thro' the muſcles of the head, the neck, the ſcapula, and the humerus: from the third pair, in particular, there is a branch which runs up to the ear: from the third, fourth, and fifth pair are formed the nerves of the diaphragm, which paſſing through the neck and breaſt, deſcend into the diaphragm: the ſixth, ſeventh, and eighth of theſe, after they have been joined by various anaſtomoſes, form the ſix robuſt nerves of the arm. To this diviſion is the ſpinal acceſſory nerve of Willis to be referred, as a ſort of ninth pair of nerves of the neck; this ariſes from the ſpinal marrow, about the origin of the third or fourth pair, and paſſes through the great foramen in the os occipitis up into the cranium.

CERVICAL VESSELS, in anatomy, denote the arteries, veins, &c. which paſs thro' the vertebræ and muſcles of the neck, up to the ſkull.

CERVICALES DESCENDENTES, a pair of muſcles, antagoniſts to the ſacro-lumbares, coming from the third, fourth, fifth, and ſix vertebræ of the neck.

CERVIX, in anatomy, denotes properly the hinder part of the neck, as contradiſtinguiſhed from the fore-part, called *jugulum*, or the throat. See NECK.

CERVIX *of the uterus*, or the neck of the uterus, that oblong canal or paſſage between the internal and external orifices of the womb, which receives and incloſes the penis, like a ſheath, whence it is alſo called vagina. See the articles UTERUS and VAGINA.

In maids it is very narrow, except in the time of the menſes, being ſcarce wide enough to admit a gooſe-quill: its inner extremity is called the oſculum internum, or the internal mouth of the womb; it opens into the vagina in form of the glans penis in men: this part is alſo very ſmall in virgins, but in women who have had children, or who are big with child, it is larger; and in the laſt it is always cloſed up with a glutinous humour. In the time of delivery, it, in a wonderful manner, expands itſelf, ſo as to give paſſage to the child. See DELIVERY.

CERUMEN, EAR-WAX, or that natural excrement collected in the meatus auditorius, and diſcharged from the glands of thoſe parts, through the membrane which lines them. It is fluid on its firſt diſcharge, but by its continuance it becomes thicker, more ſolid, viſcid, of the conſiſtence of clay, and of a bitteriſh taſte.

CERUSE, or CERUSS, WHITE-LEAD, a ſort of calx of lead, made by expoſing plates of that metal to the vapour of vinegar.

The beſt way of preparing it is the following, as recommended by Boerhaave; a glaſs-cucurbit is to be cut off in ſuch a manner, as to leave it a very long mouth; an alembic-head of glaſs is to be fitted to this; ſome vinegar is to be put into the body, and a number of thin plates of lead are to be placed in the head, in ſuch a manner, that they may ſtand ſomewhat erect; when the head is fitted on, the body is to be ſet in a gentle ſand-heat for twelve hours; then unluting the veſſels, the receiver, which had been fitted to the noſe of the head, will contain a ſweet and ſtyptic liquor, nauſeous and turbid, called the vinegar of lead, or the ſolution of lead; and the plates of lead, taken out of the head, will be found covered with a white duſty matter; this is

ceruſs:

ceruſs: and if the operation be repeated, the whole lead will be in fine reduced to this ſtate of ceruſs.

Ceruſs is uſed externally either mixed in ointments, or by ſprinkling it on old gleeting and watry ulcers, and in many diſeaſes of the ſkin. If when it is reduced into a fine powder, it is received in with the breath in inſpiration, and carried down into the lungs, it cauſes terrible aſthmas, that are almoſt incurable, and at laſt generally prove fatal; ſad inſtances of the very pernicious effects of this metal are too often ſeen among thoſe perſons who work lead in any form, but particularly among the workers in white-lead.

The painters uſe it in great quantities; and, that it may be afforded cheap to them, it is generally adulterated with common whiting; the engliſh and dutch ceruſs are very bad in this reſpect; the venetian ought always to be uſed by apothecaries.

CERUSS *of antimony*, a medicine prepared by diſtilling powdered regulus of antimony with ſpirit of nitre, till no more fumes ariſe; what remains in the retort being pulveriſed and waſhed, makes the ceruſs of antimony, which is eſteemed a powerful diuretic.

CERVUS, the STAG or DEER-KIND, in zoology, a genus of quadrupeds of the order of the pecora, the characters of which are, that they have deciduous horns, at firſt hairy, and afterwards naked and ſmooth; add to this, that there is only one dog-tooth on each ſide of the upper jaw, and that placed at a diſtance from the other teeth.

Under this genus are comprehended the camelopardalis, the alce or elk, the rangifer or rein-deer, the capreolus, and the ſtag and fallow-deer. See the articles CAMELOPARDALIS, &c.

CERVUS VOLANS, in zoology, the name of the ſtag-horned beetle, a remarkably large ſpecies of beetle, with its horns deeply jagged, or ramified, ſomewhat like thoſe of a ſtag. See plate XL. fig. 2.

CESAR and CESARIAN. See the articles CÆSAR and CÆSARIAN.

CESARE, among logicians, one of the modes of the ſecond figure of ſyllogiſms; the minor propoſition of which is an univerſal affirmative, and the other two univerſal negatives: thus,

CE No immoral books ought to be read:
SA But every obſcene book is immoral:
RE Therefore no obſcene book ought to be read.

CESENA, a town of Romania, in Italy, about fifteen miles ſouth of Ravenna: eaſt lon. 12° 50′, and north lat. 44° 20′. It is a biſhop's ſee.

CESSATION, *ceſſatio a divinis*, in the romiſh church, is when, for any notorious injury to the church, a ſtop is put to all divine offices and the adminiſtration of the ſacraments, and chriſtians are deprived of church-burial. A ceſſation differs from an interdict in this, that, during the latter, divine ſervice may be performed in ſuch churches of any place interdicted, as are not expreſly under the interdict, and even be celebrated ſolemnly on certain high feſtivals, the church-doors being ſhut: but in a ceſſation, no religious ſervice can be performed ſolemnly; the only liberty allowed, is, in order to renew the conſecrated hoſts, to repeat, every week, a private maſs in the pariſh-churches, the doors being ſhut, obſerving alſo not to ring the bell. Moreover it is lawful, during the ceſſation, to adminiſter baptiſm, confirmation, and penance to ſuch perſons as deſire it, provided they are not excommunicated, or under an interdict.

CESSAVIT, in law, a writ that lies upon this general ground, that the perſon againſt whom it is brought, has for two years neglected to perform the ſervice, or to pay the rent he is obliged to by his tenure, and has not upon his lands ſufficient goods or chattels to be diſtrained.

An heir cannot maintain a writ of ceſſavit for ceſſure made in the time of his anceſtor, unleſs it be in caſe of fee-farm rents by ſtatute.

CESSION, in law, an act by which a perſon ſurrenders and tranſmits to another perſon, a right which belonged to himſelf. Ceſſion is more particularly uſed in the civil law for a voluntary ſurrender of a perſon's effects to his creditors, to avoid impriſonment. A debtor cannot be admitted to the benefit of ceſſion unleſs by virtue of letters patent, confirmed in court by the creditors; and in order to obtain that favour, he muſt make it appear that he has no reſource left for payment, nor cannot be reproached with villany or fraud.

Ceſſion implied a mark of infamy, and obliged the perſon to wear a green cap, which was intended to ſignify, that the ceſſionary was become poor through his own folly. The italian lawyers deſcribe the ceremony of ceſſion to conſiſt in ſtriking the bare breech three times againſt a

ſtone, called *lapis vituperii*, in the preſence of a judge. Formerly it conſiſted in giving up the girdles and keys in court.

There are ſeveral debts for which a perſon cannot be admitted to make a ceſſion of his eſtate; ſuch are thoſe occaſioned by a depoſit of public or private money, and in general all thoſe debts accompanied with fraud or perfidy on the part of the debtor: perſons condemned in a fine, or damages, for any crime, are alſo excluded from the benefit of ceſſion; as are merchants who buy in groſs to ſell in retail, ſtrangers, maſters for the wages of their ſervants, perſons who have embezzelled the public money, &c. The ceſſion of goods does not liberate a debtor; ſo that whatever riches he may afterwards acquire, the creditors can ſeize for their own payment: they are obliged, however, to allow him a livelihood.

CESSION, in the eccleſiaſtical law, is when an eccleſiaſtical perſon is created a biſhop, or when a parſon of a pariſh takes another benefice without diſpenſation, or being otherwiſe qualified. In both theſe caſes their firſt benefices become void by ceſſion, without any reſignation; and to thoſe livings that the perſon had, who was created biſhop, the king may preſent for that time, whoſoever is patron of them; and in the other caſe the patron may preſent: but by diſpenſation of retainder, a biſhop may retain ſome or all the preferments he was intitled to, before he was made biſhop.

CESSIONARY, a term uſed by ſome for a bankrupt. See the article BANKRUPT.

CESSIONARY, *ceſſionarius*, likewiſe denotes the perſon to whom the ceſſion of goods is made, either voluntarily or judicially. See the article ASSIGNEE.

CESSOR, one that ceaſes or neglects to perform a duty, and for that reaſon is liable to have the writ ceſſavit brought againſt him. See the article CESSAVIT.

CESTRUM, in botany, a genus of the pentandria-monogynia claſs of plants, the flower of which is monopetalous, of a funnel-form, with a cylindrical and very long and ſlender tube, and a plane plicated limb, divided into five equal ovated ſegments; the fruit is an oblong oval berry, with one cell, containing numerous roundiſh ſeeds.

CESTUI, a french word, ſignifying *he* or *him*, frequently uſed in our law-writings. Thus, *ceſtui qui truſt*, a perſon who has lands, &c. committed to him for the benefit of another: and if ſuch perſon does not perform his truſt, he is compellable to it in chancery.

Ceſtui qui vie, one for whoſe life any lands, &c. are granted.

Ceſtui qui uſe, a perſon to whoſe uſe any one is infeoffed of lands or tenements. Formerly the feoffees to uſes were deemed owners of the land, but now the poſſeſſion is adjudged in *ceſtui qui uſe*.

CESTUS, among antient poets, a fine embroidered girdle ſaid to be worn by Venus, to which Homer aſcribes the faculty of charming and conciliating love.

CESTUS, or CÆSTUS, among the antient athletæ. See the article CÆSTUS.

CETACEOUS, an appellation given to a claſs or order of fiſhes, otherwiſe called *plagiuri*. See the article PLAGIURI.

The term cetaceous, though properly only applicable to the whale-kind, has nevertheleſs been uſed to denote any large fiſh, as the ſhark, ſea-fox, &c.

CETE, the SPERMACETI WHALE, in ichthyology, a ſpecies of the catodon with the fiſtula in its neck.

CETERACH, SPLEEN-WORT, in pharmacy, a genus of plants called by Linnæus aſplenium. See ASPLENIUM.

The leaves of this plant, gathered in September, are reckoned detergent, and extolled by Dioſcorides in curing all diſeaſes of the ſpleen.

They are alſo recommended in obſtructions of the liver, the jaundice, a quartan fever, for comminuting the ſtone, and promoting the menſes and urine.

CETTE, a port town of Languedoc, in France, ſituated on a bay of the Mediterranean, in eaſt longitude 3° 16′, and north latitude 43° 25′.

CETUS, in aſtronomy, a conſtellation of the ſouthern hemiſphere, comprehending twenty-two ſtars in Ptolemy's catalogue, twenty-one in Tycho's, and in the Britannic catalogue ſeventy-eight.

CEVA, a town of Piedmont, in Italy, ſituated on the river Tanaro, near the confines of the republic of Genoa, and about forty-two miles ſouth-eaſt of Turin; eaſt longitude 8° 6′, and north lat. 44° 25′.

CEURAWATH, the name of a particular ſect of banians, in the Eaſt-Indies, who hold the metempſychoſis with ſo much ſuperſtition, that they will not kill the leaſt inſect: their prieſts carry a piece of linen over their mouth, that no flies may enter. All the other ſects of the banians have an averſion for this, and continually exhort

exhort their auditors to ſhun all diſcourſe and converſation with them. See the article BANIANS.

CEUTA, a city of the kingdom of Fez, in Africa, ſituated on the ſouth ſide of the ſtreights of Gibraltar, almoſt oppoſite to it; weſt longitude 6° 30′, and north latitude 35° 50′.

It is a ſtrong fortreſs, in poſſeſſion of the Spaniards.

CEYLON, an iſland in the indian ocean, ſituated between 78° and 82° eaſt longitude, and between 6° and 10° north latitude.

It is about two hundred and fifty miles long, and two hundred broad. The Dutch, who are in poſſeſſion of all the ſea-coaſt, monopolize all the cinnamon produced in the iſland, the king being obliged to keep in the center of the iſland, in his capital of Candy.

CHACABOUT, the name of a ſect of the religion of the Tonquinois, between China and the Indies: they believe in the metempſychoſis, and that ſuch as receive their law, without obſerving it as they ought, ſhall, for the ſpace of three thouſand years, ramble in different bodies, to fit them for the manſions of the happy.

CHACE, or CHACING. See the articles CHASE and CHASING.

CHACK, in the manege, is ſaid of a horſe, when his head is not ſteady, but he toſſes up his noſe, and ſhakes it all of a ſudden, to avoid the ſubjection of the bridle.

In order to fix and ſecure his head, you need only to put under his noſe-band a ſmall flat band of iron bended archwiſe, which anſwers to a martingale.

CHACONE, a kind of dance in the air of a ſaraband, derived from the Moors.

The baſs conſiſts of four notes, which proceed in conjunct degrees, making divers concords and couplets with the ſame burden.

CHÆLÆ CANCRORUM, CRAB'S CLAWS. See the article CRAB.

CHÆROPHYLLUM, CHERVIL, in botany, a genus of the pentandria-digynia claſs of plants, the univerſal flower of which is almoſt uniform; the proper flowers conſiſt of five inflexo-cordated petals, the exterior being ſomewhat the largeſt; there is no pericarpium; the fruit is ovato-oblong, acuminated, and ſeparable into two parts, containing two oblong ſeeds, attenuated at the top, convex on one ſide and plane on the other.

Chervil-leaves are ſaid to be good for promoting urine and the menſes, but are ſeldom preſcribed.

CHÆTIA, in zoology, a genus of inſects of the order of the apteria, the characters of which are theſe: the body is long, ſlender, and rounded, reſembling a hair, or a piece of fine thread; and hence called, in engliſh, the hair-worm, or guinea-worm.

CHÆTODON, in ichthyology, a genus of fiſhes, of the acanthopterygious order, the characters of which are theſe: the branchioſtege membrane on each ſide contains four or five ſmall bones; and the teeth are oblong, contiguous, and flexible.

Under this genus are comprehended ſeveral ſpecies, diſtinguiſhed by having 46, 41, 38, 37, 36, and 33 rays in the back-fin.

CHAFE, or CHAFING *of a rope*, is ſaid of a rope that is galled or fretted: thus, the cable is chafed in the hawſe; that is, begun to be worn out there.

CHAFERY, a forge in an iron mill, where the iron is hammered out into complete bars, and brought to perfection.

CHAFE-WAX, an officer in the chancery, who fits the wax for ſealing writs, patents, and other inſtruments iſſued out from thence.

CHAFF, in huſbandry, the refuſe, or ſtraw that is ſeparated from corns by ſcreening or winnowing it.

CHAFFERCOUNCES, printed linens, manufactured in the mogul's dominions, and imported to Europe by way of Surat.

CHAFFERS, in our old records, ſignify wares or merchandize; and hence the word chaffering is uſed for buying and ſelling.

CHAFF-FINCH, in ornithology, the engliſh name of the *fringilla*, with an iron-coloured breaſt, and black wings ſpotted with white. See FRINGILLA.

The chaff-finch is a hardy bird, living upon any kind of ſeeds.

CHAFFING *of ropes*. See CHAFE.

CHAGRE, a fort at the mouth of a river of the ſame name, a little ſouth of Porto Bello; weſt longit. 81°, and north latitude 9° 50′.

CHAIN, *catena*, a long piece of metal compoſed of ſeveral links or rings, engaged the one in the other. They are made of divers metals, ſome round, ſome flat, others ſquare; ſome ſingle, ſome double; and ſerve to ſo many uſes, that it would be tedious to give a particular account

account of them all. A gold chain is one of the badges of the dignity of the lord mayor of London, and remains to the perſon after his being diveſted of that office, as a mark that he has paſſed the chair.

CHAIN is alſo a kind of meaſure in France, in the trade of wood for fuel; there are chains for wood by tale, for wood by the rope, for faggots, for cleft wood, and for round ſticks; there are alſo chains meaſuring the ſheaves of all ſorts of corn, particularly with regard to the payment of tythes; for meaſuring bottles of hay, and for meaſuring horſes; all theſe are divided into feet, inches, hands, *&c.* according to the uſe they are deſigned for.

CHAIN is alſo a ſtring of gold, ſilver, or ſteel-wire, wrought like a tiſſue, which ſerves to hang watches, tweezer-caſes, and other valuable toys upon. The invention of theſe pieces of workmanſhip was derived originally from England, whence foreigners give them the name of chains of England.

In making theſe chains, a part of the wire is folded into little links, of an oval form, the longeſt diameter about three lines, the ſhorteſt one. Theſe, after they have been exactly ſoldered, are again folded into two, and then bound together and interwoven by means of ſeveral other little threads of the ſame thickneſs, ſome of which paſſing from one end to the other, imitate the warp of a ſtuff, and the others, which paſs tranſverſely, the woof; there are at leaſt four thouſand little links in a chain of four pendants, ſo equally, and at the ſame time ſo firmly connected, that the eye takes the whole to conſiſt of one piece.

CHAINS *in a ſhip*, thoſe irons to which the ſhrouds of the maſts are made faſt to the chain-walls.

CHAIN-WALLS, in a ſhip, the broad timbers which are made jetting out of her ſides, to which the ſhrouds are faſtened and ſpread out, the better to ſecure the maſts.

CHAIN-SHOT, two bullets with a chain between them. They are uſed at ſea to ſhoot down yards or maſts, and to cut the ſhrouds or rigging of a ſhip.

CHAIN-PUMP. See the article PUMP.

CHAIN, in ſurveying, a meaſure of length, made of a certain number of links of iron-wire, ſerving to take the diſtance between two or more places.

Gunter's chain of 100 ſuch links, each meaſuring $7\frac{92}{100}$ inches, and conſequently equal to 66 feet, or four poles.

When you are to meaſure any line by this chain, you need have regard to no other denomination than chains and links, which are to be ſet down with a full point between them. Thus, for inſtance, if the ſide of a cloſe is found to be 10 chains 14 links, it muſt be ſet down thus, 10. 14. But if the links be under 10, a cypher muſt be prefixed; thus 10 chains 7 links, muſt be ſet down 10. 07.

Then if the field be a ſquare or parallelogram, if you multiply the length expreſſed in chains and links, by the breadth expreſſed in the ſame manner, and cut off five figures from the product, thoſe towards the left hand will be acres; then multiply the ſeparated figures by four, cutting off the ſame number of figures, and you will have the roods or quarters of an acre; and laſtly multiply the remaining figures by 40, cutting off five as before, and you will have the ſquare perches.

To take an angle as B A C by the chain (plate XL. fig. 3. N° 1.) meaſure along the ſide A B any ſmall diſtance as A D, and meaſure the like diſtance along the ſide A C to E; then meaſure the diſtance D E, which will be the chord of the angle B A C or arch E D. To plot this angle, draw the line A B at pleaſure, and from the ſcale ſet off the diſtance A D. Then from the center A with the radius A D, deſcribe with your compaſſes the arch D E, and ſet off on it the diſtance D E from D to E; then from A draw A C through the point E, and you have the angle required. See the articles SCALE, CHORD, *&c.*

The ſame method may be uſed in ſurveying a field, by reſolving it into triangles, and meaſuring the ſides and angles. But if the field has but four angles, as in the above figure, you need only meaſure the ſides and one of the angles, as B A C; for when that is plotted, according to the foregoing directions, and the length of the ſides ſet off from A to B and C, if you take the length of the ſide C D in the compaſſes, and ſetting one foot in C deſcribe a ſmall arch; alſo with the length of the ſide B D, one foot being placed in B, croſs the former arch in D, then draw the lines C D and B D, you will have the true plot of the field required.

By the chain to find the diſtance between two objects inacceſſible in reſpect to each other. From ſome place as C, (*ibid.* N° 2.) whence the diſtance between each object A and

A and B and the ſaid place is acceſſible in a right line, meaſure the diſtance C A, and continue the line to D, making C D equal to C A: meaſure alſo B C, and produce the line to E, till C E be equal to C B. Join D E; and the triangle C D E is equal and ſimilar to the triangle A B C, the diſtance D E being meaſured, will give the inacceſſible diſtance required.

CHAIR, *cathedra*, was antiently the ſuggeſtum, or pulpit, whence the prieſt or public orator ſpoke to the people. See the article CATHREDA.

It is ſtill applied to the place whence profeſſors or regents in the univerſities, deliver their lectures: thus we ſay, the profeſſor's chair. It is alſo applied to the chief magiſtrate of a city, or rather to the ſeat appropriated to his office: thus we ſay, next the chair.

Curule-CHAIR, an ivory ſeat placed on a car, wherein were ſeated the chief magiſtrates of Rome, and thoſe to whom the honour of a triumph was granted.

CHAIR, among the roman-catholics, certain feaſts held antiently in commemoration of the tranſlation of the ſee or ſeat of the vicarage of Chriſt, by St. Peter.

CHAIR-MAN, the preſident or ſpeaker of an aſſembly. See PRESIDENT.

CHAISE, a ſort of light, open chariot, or calaſh. See CHARIOT.

CHALASTICS, an appellation given to relaxing medicines, as oil, butter, *&c.*

CHALAZA, among naturaliſts, a white knotty ſort of ſtring at each end of an egg, formed of a plexus of the fibres of the membranes, whereby the yolk and white are connected together. See EGG.

CHALCANTHA, in natural hiſtory, a kind of compound ſalts, of a coarſe and irregular ſtructure, conſiderably hard, and naturally impure and opake.

Of theſe, authors enumerate a great many ſpecies, as the browniſh-red chalcanthum, or chalcitis of the antients; the yellow chalcanthum, or miſy of the Greeks; the blackiſh chalcanthum, or ſory of the antients, and ruſma of the moderns; and the gold-coloured, friable chalcanthum, or melanteria of the antients. See the articles CHALCITIS, MISY, *&c.*

CHALCEDONY, *chalcedonius*, in natural hiſtory, a genus of ſemipellucid gems, of an even and regular not tabulated texture, of a ſemi-opake, cryſtalline baſis, and variegated with different colours, diſperſed in form of miſts and clouds, and, if nicely examined, found to be owing to an admixture of various kinds of earths, but imperfectly blended in the maſs, and often viſible in diſtinct moleculæ.

Of this genus there are a great many ſpecies, as the bluiſh-white chalcedony; the browniſh-black chalcedony, or ſmoaky jaſper or capnitis of the antients; and the yellow and red chalcedony.

All the chalcedonies give fire readily with ſteel, and make no efferveſcence with aqua-fortis.

CHALCIDICA, or CHALCIDICUM, in antient architecture, a magnificent hall belonging to a tribunal or court of juſtice. Some writers make it the court where affairs of coinage were regulated; others, the mint itſelf. Vitruvius uſes it for the auditory of a baſilica; and ſometimes it expreſſes the apartment where the gods were imagined to eat.

CHALCITIS, the name given by the antients to the browniſh-red chalcanthum, of a ſoft and friable ſubſtance, and ſhewing a very irregular ſurface when broken; being compoſed of five or ſix ſeries of ſhort, waved and undulated ſtriæ. See the article CHALCANTHA.

It is found in many parts of the turkiſh dominions, and is given internally by ſome after calcination, in fluxes and hæmorrhages.

CHALDEA, or BABYLONIA, the antient name of a country of Aſia, now called Eyrac Arabic. See EYRAC ARABIC.

CHALDEE, or CHALDAIC *language*, that ſpoken by the Chaldeans, or people of Chaldea: it is a dialect of the Hebrew.

CHALDEE *paraphraſe*, in the rabbinical ſtile, is termed targum. See TARGUM.

CHALDRON, a dry engliſh meaſure, conſiſting of thirty-ſix buſhels, heaped up according to the ſealed buſhel kept at Guild-hall, London: but on ſhip-board, twenty-one chaldron of coals are allowed to the ſcore. The chaldron ſhould weigh two thouſand pounds.

CHALICE, the cup or veſſel uſed to adminiſter the wine in the ſacrament; and by the roman-catholics in the maſs.

The uſe of the chalice, or communicating in both kinds, is, by the church of Rome, denied to the laity, who communicate only in one kind; the clergy alone being allowed the privilege of communicating in both kinds.

CHALIZA, in hebrew antiquity, the ceremony whereby a woman left a widow, pulled off her brother-in-law's ſhoes, who ſhould have eſpouſed her; after which ſhe was at liberty to marry whom ſhe pleaſed. See the article WIDOW.

CHALK,

CHALK, in natural-hiſtory, the engliſh name of the white, dry marle, with a duſty ſurface, found in hard maſſes, and called by authors *creta*, and *terra cretæ*.

Chalk thrown into water, raiſes a great number of bubbles, with a hiſſing noiſe, and ſlowly diffuſes itſelf into an impalpable powder. It ferments more ſtrongly with acids than any other earth, and burns to lime.

As a medicine, chalk deſerves, perhaps, the higheſt place among the alkaline abſorbents; nor is it leſs uſeful in many of the ordinary affairs of life. Its uſe in cleaning various utenſils is well known, and it is in no ſmall repute as a manure, eſpecially for cold ſour lands; in which intention the ſoft unctuous chalk is moſt proper, as the dry, hard, and ſtrong chalk is for lime. It is a great improver of lands, and will even change the very nature of them. However, it is moſt adviſeable to mix one load of chalk, with two or three of dung, mud, or freſh mould, whereby it will become a laſting advantage to the ground: the common allowance is fourteen loads of chalk to every acre.

Black CHALK, among painters, denotes a kind of ochreous earth, of a cloſe ſtructure, and fine black colour, uſed in drawing upon blue paper.

Red CHALK, an indurated clayey ochre, common in the colour-ſhops, and much uſed by painters and artificers.

CHALK JULEP. See the article JULEP.

CHALKY LAND, that lying on a chalky bottom, whereby it is ſtrongly impregnated with the virtues of the chalk.

Theſe lands naturally produce may-weeds, poppies, *&c.* Saint-foin and trefoil likewiſe agree with them; and their beſt produce of corn is barley or wheat, though oats will likewiſe do well on them.

The beſt manure for chalky lands is rags, dung, and folding of ſheep. If rain happens to fall on them juſt after ſowing, it binds the earth ſo hard, that the corn cannot paſs thro' it. To prevent which misfortune, it is uſual to manure theſe lands with half-rotten dung, with which ſome mix ſand.

CHALLENGE, a cartel, or invitation to a duel, or other combat. See the article DUEL.

CHALLENGE, in law, is an exception made to jurors, who are returned to a perſon on a trial.

This challenge is made either to the array, or to the polls: to the array, when exception is taken to the whole number of jurors impannelled; and to the polls, when an exception is made to one or more of the jury as not indifferent.

Challenge to the jurors is likewiſe divided into challenge principal or peremptory, and challenge for cauſe; that is, upon cauſe or reaſon alledged. Challenge principal, is what the law allows without any cauſe alledged, or further examination: as a priſoner arraigned at the bar for felony, may challenge peremptorily the number allowed him by law, being twenty, one after another, alledging no further cauſe than his own diſlike: and the jurors, ſo challenged, ſhall be put off, and new ones taken in their places.

In caſes of treaſon and petit-treaſon, the number of thirty-five jurors may be peremptorily challenged, without ſhewing any cauſe; and more, both in treaſon and felony, may be challenged, ſhewing cauſe.

If thoſe who proſecute for the king challenge a juror, they are to aſſign the cauſe; and if the cauſe alledged be not a good one, the inqueſt ſhall be taken. When the king is party, if the other ſide challenge any juror above the number allowed, he ought to ſhew cauſe of his challenge immediately, while the jury is full, and before they are ſworn.

There may be a principal cauſe of challenge in civil actions, and a challenge for favour. The principal challenge is in reſpect of partiality, or default of the ſheriff, *&c.* Challenge for favour, is when the plaintiff or defendant is tenant to the ſheriff, or if the ſheriff's ſon has married the daughter of the party, *&c.*

CHALLENGE, among hunters. When hounds or beagles, at firſt finding the ſcent of their game, preſently open and cry, they are ſaid to challenge.

CHALLONS *on the Marne*, the capital of the Challonois, in the province of Champaign, in France, ſituated eighty-two miles eaſt of Paris, and thirty ſouth-eaſt of Rheims; eaſt longitude 4° 35′, north latitude 48° 55′.

It is a biſhop's ſee.

CHALLONS *on the Soan*, a city of Burgundy, in France, thirty-two miles ſouth of Dijon; eaſt long. 5°, north lat. 46° 40′.

It is the ſee of a biſhop.

CHALYBEAT, in medicine, an appella-

tion

tion given to any liquid, as wine or water, impregnated with particles of iron or ſteel.

Chalybeates act chiefly as abſorbents and deobſtruents. The action of the particles of a chalybeate, by their elaſticity, together with the momentum they give the blood by their ponderoſity, makes it not only preferable to moſt other deobſtruents, but alſo proper in other caſes; eſpecially where there is a viſcidity of the juices, the blood depauperated, and where the circulation is languid, as in moſt hectic and hypochondriac caſes, &c.

Dr. Short, in his hiſtory of the mineral waters, has claſſed them into the warm purging chalybeat, diuretic chalybeat, purging and plain ſulphur-waters.

Of the warm purging chalybeat waters, that of Buxton ſeems to be the principal. See the article BUXTON-WELLS.

The purging chalybeat contains a mineral ſpirit, ſulphur, vitriol, nitre, and ſea-ſalt, with a calcarious earth, of which ſome particles are attracted by the load-ſtone, which proves them to be iron: of theſe, the Scarborough-ſpaw is now in greateſt reputation. See SCARBOROUGH.

The diuretic chalybeat water conſiſts of much the ſame principles with the former claſs, only the ſalts are in leſs proportion; of theſe there are great numbers in Yorkſhire.

Dr. Monro, profeſſor of anatomy at Edinburgh, by pouring a tincture of galls into common water, and diſſolving therein a ſmall quantity of ſal mártis, adding ſome filings of iron and oil of vitriol, procured a water exactly like the natural chalybeat waters; and he is of opinion, that where theſe are not to be had, the artificial water may be made to anſwer all their intentions, according to its being more or leſs cloſely kept, or expoſed in the air or heat, &c. *Vide* Med. Eſſ. Edinb.

CHAM, or KHAN, a word of much the ſame import with king in engliſh: it is the title of the ſovereign princes of Tartary, and is likewiſe applied to the principal noblemen of Perſia.

CHAM, in geography, a town of the bavarian palatinate, ſituated on a river of the ſame name, about twenty-five miles north-eaſt of Ratiſbon; eaſt long. 13°, north lat. 49° 15′.

CHAMA, in the hiſtory of ſhell-fiſh, is reckoned by Linnæus a ſpecies of concha, diſtinguiſhed by its convex, equal, and patent valves. See CONCHA.

Others make the chama a diſtinct genus, the ſhell of which is formed of two valves, which are both convex, or gibboſe, and equal; and though ſhut, always leave an opening in one part.

There is a great variety among the ſeveral ſpecies of chama; ſome being perfectly ſmooth, ſome ſtriated, and ſome rugoſe, or even ſpinoſe; whilſt others are oblong, others roundiſh; ſome equilateral, and others not ſo, &c.

Among a great many elegant ſpecies of this genus, we may reckon, 1. The *concha veneris*, or Venus's ſhell, with a ſpinoſe edge. 2. The agate-chama. And, 3. The ziczac chama.

CHAMADE, in war, a ſignal made by beat of drum for a conference with the enemy, when any thing is to be propoſed; as a ceſſation of arms, to bring off the dead, or a ſignal made by the beſieged, when they have a mind to deliver up a place upon articles of capitulation: in which caſe there is a ſuſpenſion of arms, and hoſtages delivered on both ſides.

CHAMÆDRYS, GERMANDER, according to Tournefort, makes a diſtinct genus of plants; but is ranged by Linnæus under teucrium. See TEUCRIUM.

CHAMÆLEON, *chamæleo*, in zoology, a ſpecies of lizard with a ſhort rounded tail, five toes on each foot, two or three of which adhere together. See LIZARD.

There are four diſtinct varieties of this animal. 1. The arabian kind, which is ſmall, and hardly exceeding the green lizard in ſize: this is of a whitiſh colour, variegated with yellowiſh and rediſh ſpots. 2. The ægyptian, which is twice as large as the arabian, and is of a middle colour between the whitiſh hue of the arabian and a fair green: this changes its colour to a paler or deeper yellow. 3. The mexican. And fourthly, a kind ſometimes ſhewn about as a ſight, and met with by J. Faber Lynceus at Rome, which differed from all the others. The arabian and mexican chameleons ſeldom exceed ſix inches in length; the ægyptian is nine or more; its head is large, but the thickneſs of its body is not to be determined, as the creature alters that at pleaſure, as it more or leſs inflates its body; and this inflation not only goes through the whole body, but into the legs and tail. This inflation is not at all like the breathing of other animals, for the body when thus puffed out will remain ſo two hours, only gradually and inſenſibly ſinking all the time, and afterwards will be inflated again, but that much

much more quickly than it ſubſided. It is able a long time to continue either of theſe ſtates, but more frequently remains empty for a conſiderable ſpace, in which time, though before it appeared in good caſe, it looks miſerably lean and lank, and its back-bone may be ſeen perfectly, its ribs counted, and even the large tendons of the feet diſtinctly obſerved by the naked eye through the ſkin. The back-bone, however, is not ſerrated as many have affirmed, but makes, in this its lean ſtate, a plain ſharp ridge, and the whole animal looks ſo miſerably meagre, that it has not unaptly been called a living ſkin. The head is very like that of ſome fiſhes, and is joined almoſt immediately to the breaſt, the neck being extremely ſhort, and has at the ſides two cartilaginous eminences, in the manner of fiſhes. It has a creſt ſtanding up in the middle of the forehead, and two others over the eyes, and between the creſts there are two remarkable depreſſions, the noſe and mouth running from the eyes with a double edge to the end of the ſnout, reſemble thoſe of a frog: at the extremity of the noſe there are two perforations, which ſeem to ſerve as noſtrils; the mouth being always kept cloſe ſhut, and the creature appearing to have no power of reſpiring but by means of theſe. Its mouth is furniſhed with teeth, or rather with continued denticulated bones. Theſe are of no ſervice to the creature in eating, ſince it preys on flies, and ſwallows them whole; but may ſerve for its defence in holding faſt a ſtick in its mouth, which, according to Ælian, this creature does, placing the ſtick croſs-ways, to prevent its being ſwallowed by ſerpents.

The ſtructure and motion of this creature's eyes is very ſurprizing; they are very large, and ſet in large cavities, appearing to be large ſpheres, of which one half ſtands out of the head, and is covered with a thin ſkin, perforated with a ſmall hole at the top, through which is ſeen a very vivid and bright pupil, ſurrounded with a yellow iris; this hole is properly a longitudinal ſlit, which the creature opens more or leſs wide at pleaſure, and the eye ſeems fixed to this eye-lid ſo as to follow all its motions, not turning round within it, as in other creatures. The motion of the eyes of this creature is not leſs ſingular than their ſtructure, ſince it can turn them ſo as to ſee what paſſes either far backward, on either ſide, or directly behind it, without at all moving the head, which is fixed to the ſhoulders, and the creature can give one eye all theſe motions while the other is perfectly ſtill. The trunk of the body is properly all breaſt, for the creature has no belly, its ribs being continued to the ilia; the feet have all five toes, two behind, and three before, the hinder ones being as large as the others. This creature moves as ſlow as the tortoiſe, which appears very ſingular, as its legs are ſufficiently long, and it has no great weight of body to carry; but it is ſaid, that on trees, in its wild ſtate, it moves very nimbly. Its tail when inflated is round as that of a rat or ſnake; when empty, it is very lank, and has three longitudinal ridges running along it, which are owing to the apophyſes of the ſpine. This tail is a great ſafety to the creature on trees, as it twiſts it round the branches when in any danger of falling.

The ſkin of the chamæleon from the head to the laſt joint of the tail is, according to ſome, plaited, and rough like a ſaw; but Dr. Goddard affirms, that it is grained like ſhagreen; the biggeſt grains being about the head; the next on the ridge of the back. The tongue is half as long as the animal; it conſiſts of a white fleſh, round as far as the tip, which is hollow, like an elephant's trunk, whence ſome call it a trunk. This it can dart out very nimbly, and draw in again, over a bone that reaches from the root half its length. The great uſe of its tongue is to catch flies: ſome ſay the tongue is tipped with a glutinous matter which the flies ſtick to. The royal academy of ſciences at Paris frequently obſerved the chamæleon which they had to catch and ſwallow flies; they found alſo the ſigns of them in its fæces: and, upon diſſection, the ſtomach and inteſtines were found full of them. So that the common tradition of the chamæleon's living upon air proves contrary to experience.

The chamæleon has been ſuppoſed, by both the antients and moderns, to have a faculty of changing its colour, and aſſuming that of the objects near it. M. Perrault aſſures us, that the colour of the chamæleon, when at reſt and in the ſhade, is ſomewhat various; that at Paris was a bluiſh grey; but, when expoſed to the ſun, became a darker grey; and its leſs illuminated part changed into divers colours; forming ſpots, half as big as one's finger end, ſome of an iſabella colour;

colour; the grains, not illuminated at all, reſembled a cloth of divers colours. That deſcribed by Dr. Goddard in the philoſophical tranſactions was of ſeveral colours, a green, a ſandy yellow, and a deeper yellow, or liver colour; but one might eaſily imagine ſome mixture of all colours. He adds, that upon rubbing or warming, it ſuddenly became full of black ſpots, as big as a large pin's head, equally diſperſed on the ſides, all which would afterwards vaniſh. Mr. Perrault obſerves ſomething like this of the Paris chamæleon, that upon handling or ſtirring, it would appear ſtained with dark ſpots, bordering on green: and that, wrapping it up in a linen cloth for a few minutes, it would come out whitiſh, though not always ſo; but would not take the colour of any other ſtuff it was wrapped in. So that what Theophraſtus and Plutarch write of its aſſuming all the colours it comes near, is contrary to experience. Monconys aſſures us, that the chamæleon, when placed in the ſun, appears green, though near no green object; that it appears black by the candle, though placed on white paper; and that, when ſhut up in a box, it becomes yellow and green: and he ſays, that it never aſſumes any other colour than theſe.

Naturaliſts, are very little agreed, as to the reaſon of this change of colour; and therefore we ſhall not repeat their ſeveral hypotheſes, the following being ſufficient for our purpoſe.

The chamæleon is repreſented as an exceeding lean animal, inſomuch that the Italians call it a living ſkin. M. Perrault obſerves of that he diſſected in the king's library, that one hour it appeared to be a mere ſkin, and yet the next it would appear plump. Hence we gather that it muſt have a very great command over the ſkin as to tenſion and laxity. Now, the animal, having it in his power to fill the ſkin more or leſs, cannot only alter the texture of the fibres, upon which their reflexive quality greatly depends; but alſo to bring parts into ſight which before lay concealed, or to conceal ſuch as before lay open: and it is more than probable, that the parts commonly covered are of a ſomewhat different colour from thoſe always open to the air. On theſe principles, probably, all the phænomena in the chamæleon's colour may be ſolved. The animal, it is plain, has a power of reflecting different coloured rays from the ſame parts; and likewiſe making certain parts reflect, and prevent others from doing ſo; and hence that medley of colours.

CHAMÆLEON-THISTLE, *ixia*, in botany. See the article IXIA.

CHAMÆMILE, *chamæmelum*, STINKING MAY-WEED, in botany, the ſame with the anthemis of Linnæus. It belongs to the ſyngeneſia polygamia-ſuperflua claſs of plants; its flower is of the compound, radiated kind; and its fruit is a ſingle, oval, compreſſed, and naked ſeed, contained in the calyx, or cup of the flower.

Chamæmile-flowers are given in infuſion by way of emetic, are uſed in emollient decoctions, and are always an ingredient in clyſters. The dried leaves are accounted laxative and emollient, and ſaid to promote urine and the menſes.

CHAMÆPITYS, GROUND-PINE, in botany, makes a diſtinct genus of plants, according to Tournefort, but is comprehended under teucrium by Linnæus. See the article TEUCRIUM.

CHAMÆROPS, in botany, a genus of plants, the claſs of which is not yet perfectly aſcertained; the corolla of the hermaphrodite flower is divided into three parts; the petals are ovated, erect, acute, and inflected at the top: it contains ſix ſtamina: the fruit conſiſts of three berries, globoſe, with one cell, containing ſolitary, globoſe ſeeds. The corolla of the male flower is the ſame as in the hermaphrodite.

CHAMANIM, in jewiſh antiquity, idols, expoſed to the ſun upon the tops of houſes, according to Rabbi Solomon: others will have the chamanim to be the ſame with what the Greeks call pyræa, that is, portable chapels, or temples, made in the form of chariots, in honour of the ſun.

CHAMBER, in building, any room ſituated between the lowermoſt and the uppermoſt rooms: in moſt houſes there are two, in others three or more ſtories of chambers. Sir Henry Wotton directs, that the principal chambers for delight, be ſituated towards the eaſt. Palladio's rules for the height of chambers, antichambers, and halls, either flat or arched, are as follows. 1. If they be flat, he adviſes to divide the breadth into three parts, and to take two of them for the height of the ſtory from the floor to the joiſt. If the chamber is deſired higher, the breadth muſt be divided into ſeven, of which take five for the height. 2. The height of the ſecond ſtory, ſhould be $\frac{1}{12}$ leſs than

that of the chambers below. 3. For an attic or third-ſtory, the ſecond muſt be divided into twelve equal parts; nine of which will give the height from the floor to the bottom of the joiſts.

Bed-CHAMBER, one with a bed in it. See the article BED.

Privy-CHAMBER. Gentlemen of the privy chamber, are ſervants of the king, who are to wait and attend on him and the queen at court, in their diverſions, *&c.* Their number is forty-eight under the lord-chamberlain, twelve of whom are in quarterly waiting, and two of theſe lie in the privy chamber.

In the abſence of the lord chamberlain, or vice-chamberlain, they execute the king's orders: at coronations, two of them perſonate the dukes of Aquitain and Normandy: and ſix of them, appointed by the lord-chamberlain, attend ambaſſadors from crowned heads to their audiences, and in public entries. The gentlemen of the privy-chamber, were inſtituted by Henry VII.

CHAMBER, in policy, the place where certain aſſemblies are held, alſo the aſſemblies themſelves. Of theſe, ſome are eſtabliſhed for the adminiſtration of juſtice, others for commercial affairs.

Of the firſt kind are, 1. Star-chamber, ſo called, becauſe the roof was painted with ſtars; the authority, power, and juriſdiction of which are abſolutely aboliſhed by the ſtatute 17 Car. I. 2. Imperial chamber of Spire, the ſupreme court of judicatory in the empire, erected by Maximilian I. This chamber has a right of judging by appeal, and is the laſt reſort of all civil affairs of the ſtates and ſubjects of the empire, in the ſame manner as the aulic council of Vienna. Nevertheleſs it is reſtrained in ſeveral caſes; it takes no notice of matrimonial cauſes, theſe being left to the pope; nor of criminal cauſes, which either beleng to particular princes or towns in their reſpective territories, or are cognizable by all the ſtates of the empire in a diet. By the treaty of Oſnaburg, in 1648, fifty aſſeſſors were appointed for this chamber, whereof twenty-four were to be proteſtants, and twenty-ſix catholics, beſides five preſidents, two of them proteſtants, and the reſt catholics. 3. Chamber of accounts, a ſovereign court in France, where accounts are rendered of all the king's revenues, inventories, and avowels thereof regiſtered, oaths of fidelity taken, and other things relating to the finances tranſacted. There are nine in France, that of Paris is the chief; it regiſters proclamations, treaties of peace, naturalizations, titles of nobility, *&c.* All the members wear long black gowns of velvet, of ſattin or damaſk, according to their places. 4. Eccléſiaſtical chambers in France, which judge by appeal of differences about collecting the tythes. 5. Chamber of audience, or grand chamber, a juriſdiction in each parliament of France, the counſellors of which are called *jugeurs*, or judges, as thoſe of the chamber of inqueſts are called *rapporteurs*, reporters of proceſſes by writing. 6. Chamber of the edict, or miparty, a court eſtabliſhed by virtue of the edict of pacification, in favour of thoſe of the reformed religion. This chamber is now ſuppreſſed. 7. Apoſtolical chamber of Rome, that wherein affairs relating to the revenues of the church and the pope are tranſacted. This council conſiſts of the cardinal-camerlingo, the governor of the rota, a treaſurer, an auditor, a preſident, one advocate-general, a ſolicitor-general, a commiſſary, and twelve clerks. 8. Chamber of London, an apartment in Guildhall, where the city money is depoſited.

Of the laſt ſort are, 1. The chambers of commerce. 2. The chambers of aſſurance. And, 3. The royal or ſyndical chamber of bookſellers in France.

The chamber of commerce is an aſſembly of merchants and traders, where the affairs relating to trade are treated of. There are ſeveral eſtabliſhed in moſt of the chief cities of France; and in our own country, we have lately ſeen chambers of this kind erected for carrying on the britiſh herring fiſhery. Chamber of aſſurance in France, denotes a ſociety of merchants and others for carrying on the buſineſs of inſuring; but in Holland, it ſignifies a court of juſtice, where cauſes relating to inſurances are tried. Chamber of bookſellers in Paris, an aſſembly conſiſting of a ſyndic and aſſiſtants, elected by four delegates from the printers, and twelve from the bookſellers, to viſit the books imported from abroad, and to ſearch the houſes of ſellers of marbled paper, printſellers, and dealers in printed paper for hangings, who are prohibited from keeping any letters proper for printing books. In the viſitation of books, which ought to be performed by three perſons at leaſt from among the ſyndic and aſſiſtants, all libels againſt the honour

nour of God and the welfare of the ſtate, and all books printed either within or without the kingdom in breach of their regulations and privileges, are ſtopt, even with the merchandizes that may happen to be in the bales with ſuch libels, or other prohibited books. The days appointed for this chamber to meet, are Tueſdays and Fridays, at two o'clock in the afternoon.

CHAMBER, in war, is ſaid, 1. Of a powder-chamber, or bomb-chamber, a place ſunk under ground for holding the powder or bombs, where they may be out of danger, and ſecured from the rain. 2. Of the chamber of a mine, the place, moſt commonly of a cubical form, where the powder is confined. And, 3. Of the chamber of a mortar, that part of the chace, much narrower than the reſt of the cylinder, where the powder lies. It is of different forms, ſometimes like a reverſed cone, ſometimes globular, with a neck for its communication with the cylinder, whence it is called a bottled chamber, but moſt commonly cylindrical, that being the form which is found by experience to carry the ball to the greateſt diſtance.

CHAMBERDEKINS, in old writers, were poor iriſh ſcholars, cloathed in mean habits, and living under no rule. They were baniſhed England by ſtatute Henry V. cap. 8.

CHAMBERLAIN, an officer charged with the management and direction of a chamber. See the article CHAMBER.

There are almoſt as many kinds of chamberlains as chambers, the principal whereof are as follow.

Lord CHAMBERLAIN *of Great Britain*, the ſixth great officer of the crown; to whom belongs livery and lodging in the king's court; and there are certain fees due to him from each archbiſhop or biſhop, when they perform their homage to the king; and from all peers at their creation; or doing their homage. At the coronation of every king, he is to have forty ells of crimſon velvet for his own robes. This officer, on the coronation-day, is to bring the king his ſhirt, coif, and wearing cloaths; and after the king is dreſſed, he claims his bed, and all the furniture of his chamber for his fees: he alſo carries at the coronation, the coif, gloves, and linen to be uſed by the king on that occaſion; alſo the ſword and ſcabbard, the gold to be offered by the king, and the robes royal and crown: he dreſſes and undreſſes the king on that day, waits on him before and after dinner *&c.* To this officer belongs the care of providing all things in the houſe of lords, in the time of parliament; to him alſo belongs the government of the palace of Weſtminſter: he diſpoſes likewiſe of the ſword of ſtate, to be carried before the king, to what lord he pleaſes.

Lord CHAMBERLAIN *of the houſhold*, an officer who has the overſight and direction of all officers belonging to the king's chambers, except the precinct of the king's bed-chamber.

He has the overſight of the officers of the wardrobe at all his majeſty's houſes, and of the removing wardrobes, or of beds, tents, revels, muſic, comedians, hunting, meſſengers, *&c.* retained in the king's ſervice. He moreover has the overſight and direction of the ſerjeants at arms, of all phyſicians, apothecaries, ſurgeons, barbers, the king's chaplains, *&c.* and adminiſters the oath to all officers above ſtairs.

Other chamberlains, are thoſe of the king's court of exchequer, of north Wales, of Cheſter, of the city of London, *&c.* in which caſes this officer is generally the receiver of all rents and revenues belonging to the place whereof he is chamberlain.

In the exchequer there are two chamberlains, who keep a controulment of the pells of receipts and exitus, and have certain keys of the treaſury, records, *&c.*

CHAMBERLAIN *of London* keeps the city-money, which is laid up in the chamber of London: he alſo preſides over the affairs of maſters and apprentices, and makes free of the city, *&c.*

His office laſts only a year, but the cuſtom uſually obtains to re-chooſe the ſame perſon, unleſs charged with any miſdemeanor in his office.

Vice-CHAMBERLAIN, called alſo in antient ſtatutes, under-chamberlain, is an officer in the court next under the lord chamberlain; and who, in his abſence, has command and controul of all affairs belonging to that part of the houſhold, called the chamber above ſtairs.

CHAMBERRY, the capital of the dutchy of Savoy, in Italy, ſituated ninety miles north-weſt of Turin, and forty-five ſouth of Geneva; eaſt long. 5° 45′, north lat. 45° 40′.

CHAMBRANLE, among builders, an ornament of ſtone or wood bordering the three ſides of doors, windows and chimnies. It is different according to the ſe-

veral

veral orders, and conſiſts of three parts, *viz.* the top, called the traverſe, and the two ſides, the aſcendants.

The chambranle of an ordinary door is frequently called the door-caſe, and that of a window, the window-frame: this is generally when it is plain, and without mouldings.

CHAMELEON, or CHAMÆLEON. See the article CHAMÆLEON.

CHAMFER, or CHAMFRET, in architecture, an ornament conſiſting of half a ſcotia, being a kind of a ſmall furrow or gutter on a column, called alſo ſcapus, ſtria, *&c.*

CHAMFERING, in architecture, a term uſed for the cutting the under edge of any thing aſlope or level.

CHAMOIS, or CHAMOIS-GOAT, in zoology, the name of the rupicapra, a creature of the goat-kind, with erect and ſhort but hooked horns. See plate XL. fig. 4.

It is from the ſkin of this animal that the chamois or ſhammy leather is made. See the article SHAMMY.

CHAMPAIGN, a province of France, bounded by Picardy, on the north; by Lorrain, on the eaſt; by Burgundy, on the ſouth; and by the iſle of France, on the weſt.

Its capital is Troyes.

CHAMPAIGN, or CAMPAIGN. See the article CAMPAIGN.

CHAMPAIN, or *point* CHAMPAIN, in heraldry, a mark of diſhonour in the coat of arms of him who kills a priſoner of war, after he has cried quarter.

CHAMPART, CAMPARTUM, or CAMPIPARS, in our old law-books, ſignifies any part or portion of a large field or ground.

CHAMPARTORS, or CHAMPERTORS, among lawyers, ſuch as jointly move pleas or ſuits, either by their own procurement, or by that of others, and ſue them at their own proper coſts, in order to have part of the lands, or other matters in diſpute.

CHAMPARTY, or CHAMPERTY, in law, a contract made with either the plaintiff or defendant in any ſuit at law, for giving part of the land, debt, *&c.* ſued for, to the party who undertakes the proceſs at his own proper charges, provided he ſucceeds therein.

This ſeems to have been an antient grievance in this nation; for notwithſtanding ſeveral ſtatutes were made in the reign of Edward I. yet in that of Edward III. it was enacted, that whereas former ſtatutes provided redreſs for this evil in the King's-bench only, from henceforth it ſhould be lawful for the juſtices of the Common-pleas likewiſe, and juſtices of aſſize, to take cognizance in theſe caſes.

CHAMPION, a perſon who undertakes a combat in the place or quarrel of another; and ſometimes the word is uſed for him who fights in his own cauſe.

It appears that champions, in the juſt ſenſe of the word, were perſons who fought inſtead of thoſe that, by cuſtom, were obliged to accept the duel, but had a juſt excuſe for diſpenſing with it, as being too old, infirm, or being eccleſiaſtics, and the like. Such cauſes as could not be decided by the courſe of common law, were often tried by ſingle combat; and he who had the good fortune to conquer, was always reputed to have juſtice on his ſide. Champions who fought for intereſt only, were held infamous: theſe hired themſelves to the nobility, to fight for them in caſe of need, and did homage for their penſion.

When two champions were choſen to maintain a cauſe, it was always required that there ſhould be a decree of the judge to authoriſe the combat: when the judge had pronounced ſentence, the accuſed threw a gage or pledge, originally a glove or gantlet, which being taken up by the accuſer, they were both taken into ſafe cuſtody, till the day of battle appointed by the judge.

Before the champions took the field, their heads were ſhaved to a kind of crown or round, which was left at the top: then they made an oath that they believed the perſon who retained them, to be in the right, *&c.* They always engaged on foot, and with no other weapon than a club and a ſhield, which weapons were bleſſed in the field by the prieſt, with a world of ceremonies; and they always made an offering to the church, that God might aſſiſt them in the battle.

The action began with railing, and giving each other ill language; and at the ſound of a trumpet, they went to blows. After the number of blows or encounters expreſſed in the cartel, the judges of the combat threw a rod into the air, to adverti ſe the champions that the combat was ended. If it laſted till night, or ended with equal advantage on both ſides, the accuſed was reputed the victor. If the conquered champion fought in the cauſe of a woman, and it was a capital offence,

the woman was burnt, and the champion hanged. If it was the champion of a man, and the crime capital, the vanquiſhed was immediately diſarmed, led out of the field, and hanged, together with the party whoſe cauſe he maintained. If the crime was not capital, he not only made ſatisfaction, but had his right hand cut off: the accuſed was to be cloſe confined in priſon, till the battle was over.

CHAMPION *of the king*, a perſon whoſe office it is, at the coronation of our kings, to ride armed into Weſtminſter-hall, while the king is at dinner there, and, by the proclamation of a herald, make challenge to this effect, *viz.* "That if any man "ſhall deny the king's title to the crown, "he is there ready to defend it in ſingle "combat, &c." Which done, the king drinks to him, and ſends him a gilt cup, with a cover, full of wine, which the champion drinks, and has the cup for his fee.

CHAMPION, or CHAMPAIN *lands*, are lands not incloſed; or large fields, downs, or places without woods or hedges.

CHAMPLAIN, the name of a lake, ſituated northwards of the province of New York, in north America; weſt long. 75°, north lat. 45°.

CHANCE, in a general ſenſe, a term applied to events, not neceſſarily produced, as the natural effects of any proper foreknown cauſe.

We certainly mean no more in ſaying that a thing happened by chance, than that its cauſe is unknown to us: for chance itſelf is no natural agent or cauſe; it is incapable of producing any effect, and is no more than a creature of man's own making; for the things done in the corporeal world, are really done by the parts of the univerſal matter, acting and ſuffering, according to the laws of motion eſtabliſhed by the author of nature.

Chance is alſo confounded with fate and deſtiny.

CHANCE is more particularly uſed for the probability of an event, and is greater or leſs, according to the number of chances by which it may happen, compared with the number of chances by which it may fail. Thus, if an event has three chances to happen, and two to fail, the probability of it happening may be eſtimated $\frac{3}{5}$, and the probability of its failing $\frac{2}{5}$. Therefore if the probability of happening and failing be added together, the ſum will always be equal to unity.

If the probabilities of happening and failing are unequal, there is what is commonly called odds for, or againſt, the happening or failing, which odds are proportional to the number of chances for happening or failing.

The expectation of obtaining any thing, is eſtimated by the value of that thing, multiplied by the probability of obtaining it. The riſk of loſing any thing, is eſtimated by the value of that thing, multiplied by the probability of loſing it. If, from the expectations which the gameſters have upon the whole ſum depoſited, the particular ſums they depoſite (that is, their own ſtakes) be ſubſtracted, there will remain the gain, if the difference is poſitive; or the loſs, if the difference is negative. Again, if from the reſpective expectations which either gameſter has upon the ſum depoſited by his adverſary, the riſk of loſing what he himſelf depoſites be ſubſtracted, there will likewiſe remain his gain or loſs.

If there is a certain number of chances by which the poſſeſſion of a ſum can be ſecured, and alſo a certain number of chances by which it may be loſt, that ſum may be inſured for that part of it, which ſhall be to the whole, as the number of chances there is to loſe it, is to the number of all the chances.

If two events have no dependence on each other, ſo that p be the number of chances by which the firſt may happen, and q the number of chances by which it may fail; and likewiſe, that r be the number of chances by which the ſecond may happen, and s the number of chances by which it may fail: multiply $p+q$ by $r+s$ and the product $pr+qr+ps+qs$ will contain all the chances by which the happening or failing of the events may be varied amongſt one another.

From what has been ſaid, it follows, that if a fraction expreſſes the probability of an event, and another fraction the probability of another event, and theſe two events are independent, the probability that theſe two events will happen, will be the product of the two fractions.

For the application of the doctrine of chances to gaming, ſee GAMING.

M. Placete obſerves, that the antient ſors, a kind of lottery, or chance, was inſtituted by God himſelf, there being in the old teſtament ſeveral ſtanding laws and expreſs commands for its uſe, on certain occaſions: hence aroſe the *ſortes ſanctorum*,

ſanctorum, or method of determining things among the antient chriſtians, by opening ſome of the ſacred books, and pitching on the firſt verſe they caſt their eye on, as a ſure prognoſtic of what was to happen. The *ſortes homericæ, virgilianæ, prænestinæ, &c.* uſed by the heathens, were with the ſame view, and much in the ſame manner.

Many among the modern divines, hold chance to be conducted in a particular manner by providence, and eſteem it an extraordinary way which God uſes to declare his will, and a kind of immediate revelation. On this foundation it is, that they condemn all manner of lotteries and gaming, which are alſo blameable in a political view.

CHANCE-MEDLEY, in law, is the accidental killing of a man, not altogether without the killer's fault, though without any evil intention; and is where one is doing a lawful act, and a perſon is killed thereby: for, if the act be unlawful, it is felony.

The difference betwixt chance-medley and manſlaughter is this: if a perſon caſt a ſtone, which happens to hit one, and he dies; or if a workman, in throwing down rubbiſh from a houſe, after warning to take care, kill a perſon, it is chance-medley and miſadventure: but if a perſon throws ſtones on the highway, where people uſually paſs; or a workman throws down rubbiſh from a houſe in cities and towns where people are continually paſſing; or if a man whips his horſe in the ſtreet, to make him gallop, and the horſe runs over a child and kills it, it is manſlaughter: but if another whips the horſe, it is manſlaughter in him, and chance-medley in the rider. In chance-medley the offender forfeits his goods, but has a pardon of courſe.

CHANCEL, a particular part of the fabric of a chriſtian church; or that part of the choir between the altar and the baluſtrade that incloſes it, where the miniſter is placed at the celebration of the communion.

CHANCEL is alſo the rector's freehold and part of his glebe, and therefore he is obliged to repair it; but where the rectory is impropriate, the impropriator muſt do it.

CHANCELLOR, an officer ſuppoſed originally to have been a notary or ſcribe under the emperors, and named *cancellarius*, becauſe he ſat behind a lattice, called in latin *cancellus*, to avoid being crowded by the people.

According to a late treatiſe, the chancellor originally preſided over a political college of ſecretaries, for the writing of treaties, and other public buſineſs; and the court of equity, under the old conſtitution, was held before the king and his council, in the palace, where one ſupreme court for buſineſs of every kind was kept. At firſt the chancellor became a judge, to hear and determine petitions to the king, which were preferred to him; and in the end, as buſineſs increaſed, the people addreſſed their ſuit to the chancellor, and not to the king; and thus the chancellor's equitable power, by degrees, commenced by preſcription.

Lord high CHANCELLOR *of Great-Britain*, or *lord keeper of the great ſeal*, is the higheſt honour of the long robe, being made ſo *per traditionem magni ſigilli, per dominum regem*, and by taking the oaths: he is the firſt perſon of the realm next after the king, and princes of the blood, in all civil affairs; and is the chief adminiſtrator of juſtice, next the ſovereign, being the judge of the court of chancery.

All other juſtices are tied to the ſtrict rules of the law in their judgment: but the chancellor is inveſted with the king's abſolute power, to moderate the written law, governing his judgment purely by the law of nature and conſcience, and ordering all things according to equity and juſtice. In this reſpect, Stamford ſays, the chancellor has two powers, one abſolute, the other ordinary; meaning, that although by his ordinary power, in ſome caſes, he muſt obſerve the forms of proceedings, as other inferior judges; yet in his abſolute power, he is not limited by the law, but by conſcience and equity.

The lord chancellor not only keeps the king's great ſeal; but alſo all patents, commiſſions, warrants, *&c.* from the king, are, before they are ſigned, peruſed by him: he has the diſpoſition of all eccleſiaſtical benefices in the gift of the crown under 20 l. a year, in the king's books; and he is ſpeaker of the houſe of lords. See the article PARLIAMENT.

CHANCELLOR *of a cathedral*, an officer that hears leſſons and lectures read in the church; either by himſelf or his vicar; to correct and ſet right the reader when he reads amiſs; to inſpect ſchools; to hear cauſes; apply the ſeal, write and diſpatch the letters of the chapter; keep the

the books; take care that there be frequent preachings both in the church and out of it; and assign the office of preaching to whom he pleases.

CHANCELLOR *of a diocese*, a lay officer under a bishop, who is judge of his court. See the article BISHOP'S-*court*.

CHANCELLOR *of the dutchy of Lancaster*, an officer appointed chiefly to determine controversies between the king and his tenants of the dutchy land, and otherwise to direct all the king's affairs belonging to that court. See the article DUTCHY COURT.

CHANCELLOR *of the exchequer*, an officer who presides in that court, and takes care of the interest of the crown.

He is always in commission with the lord treasurer, for the letting of crown-lands, *&c.* and has power, with others, to compound for forfeitures of lands, upon penal statutes: he has also great authority in managing the royal revenues, and in matters relating to the first fruits.

CHANCELLOR *of the order of the garter, and other military orders*, is an officer who seals the commissions and mandates of the chapter and assembly of the knights, keeps the register of their proceedings, and delivers acts thereof under the seal of their order.

CHANCELLOR *of an university*, is he who seals the diplomas, or letters of degrees, provision, *&c.* given in the university.

The chancellor of Oxford is usually one of the prime nobility, chosen by the students themselves in convocation. He is their chief magistrate; his office is *durante vita*, to govern the university, preserve and defend its rights and privileges, convoke assemblies, and do justice among the members under his jurisdiction.

Under the chancellor is the vice-chancellor who is chosen annually, being nominated by the chancellor, and elected by the university in convocation: he is always the head of some college, and in holy orders. His proper office is to execute the chancellor's power, to govern the university according to her statutes, to see that officers and students do their duty, that courts be duly called, *&c.* When he enters upon his office, he chuses four pro-vice-chancellors out of the heads of the colleges, to execute his power in his absence.

The chancellor of Cambridge is also usually one of the prime nobility, and in most respects the same as that in Oxford, only he does not hold his office *durante vita*, but may be elected every three years. Under the chancellor there is a commissary, who holds a court of record for all privileged persons and scholars under the degree of master of arts, where all causes are tried and determined by the civil and statute law, and by the custom of the university.

The vice-chancellor of Cambridge is chosen annually, by the senate, out of two persons nominated by the heads of the several colleges and halls.

CHANCERY, the grand court of equity and conscience, instituted to moderate the rigour of the other courts that are bound to the strict letter of the law.

The jurisdiction of this court is of two kinds, ordinary or legal, and extraordinary or absolute. The ordinary jurisdiction is that wherein the lord chancellor, who is judge of this court, in his proceedings and judgment, is bound to observe the order and method of the common law; in such cases the proceedings, which were formerly in Latin, but now in English, are filed or enrolled in the petty-bag-office; and the extraordinary, or unlimited power, is that jurisdiction which the court exercises in cases of equity, wherein relief is to be had by bill and answer.

The ordinary court holds plea of recognizances acknowledged in the chancery, writs of *scire facias* for repeal of the king's letters patent, *&c.* also of all personal actions, by or against any officer of the court, and of several offences and causes by act of parliament; all original writs, commissions of bankrupts, of charitable uses, of ideots, lunacy, *&c.* are issued hence.

The extraordinary court gives relief for and against infants, notwithstanding their minority; for and against married women, notwithstanding their coverture. All frauds and deceits, for which there is no redress at common law, all breaches of trust, confidences and accidents, as to relieve obligors, mortgagors, *&c.* against penalties and forfeitures, where the intention was to pay the debt, are here remedied. But in all cases where the plaintiff can have his remedy at law, he ought not to be relieved in chancery; and a thing which may be tried by a jury, is not triable in this court.

The court of chancery will not retain a suit for any thing under ten pounds value, except in cases of charity, nor for

lands, &c. under forty shillings *per ann.*

In this court all patents, most sorts of commissions, deeds between parties touching lands and estates, treaties with foreign princes, &c. are sealed and enrolled. Out of it are issued writs to convene the parliament and convocation, proclamations and charters, &c. For the several officers belonging to the court of chancery, see the articles MASTER *of the rolls*, MASTERS *in chancery*, CLERK, &c.

Apostolic CHANCERY, a court in the church of Rome, belonging to the pope.

The pope's datory and chancery courts were formerly one and the same thing: but the multitude of affairs to be transacted therein, obliged him to divide it into two tribunals, which are so nearly related to one another, that the chancery does no more than dispatch all that has passed through the datory court. See the article DATORY *court*.

The officers belonging to this court, are the regent, prelates, and registers. There are also six masters in chancery, whose business it is to collect the bulls: each of these employments is purchased for six thousand crowns. These are subordinate to the master of the rolls, who keeps the registers of the bulls.

CHANCRE, in surgery. See the articles SHANKER and ULCER.

CHANDELIER, in fortification a kind of moveable parapet, consisting of a wooden frame, made of two upright stakes, about six feet high, with cross planks between them; serving to support facines to cover the pioniers.

The chandeliers differ from blinds only in this, that the former cover the men only before, whereas the latter cover them also above.

They are used in approaches, galleries, and mines, to hinder the workmen from being driven from their stations.

CHANFRIN, in the manege, the fore-part of a horse's head, extending from under the ears along the interval between the eye-brows down to his nose.

CHANGE, in the manege. To change a horse, or change hand, is to turn or bear the horse's head from one hand to the other, from the right to the left, or from the left to the right.

You should never change your horse without pushing him forward upon the turn, and after the turn, push him on straight, in order to a stop.

CHANGE *of seed*, in husbandry, the sowing a field or spot of ground first with one kind of seed, then another, and then a third kind. See the article SEED.

This practice, however universal, and perhaps necessary in the common method of husbandry, is nevertheless superseded or rendered useless by the new method, called horse-hoeing husbandry. See the article HUSBANDRY.

CHANGES, in arithmetic, the variations or permutations of any number of things, with regard to their position, order, &c.

The method of finding out the number of changes, is by a continual multiplication of all the terms in a series of arithmetical progressionals; whose first term, and common difference, is unity, or 1; and last term the number of things proposed to be varied, *viz.* $1\times2\times3\times4\times5\times6\times7$, &c. as will appear from what follows:

1st, If the things proposed to be varied are only two, they admit of a double position, as to order of place, and no more.

Thus, $\left\{\begin{matrix}1\cdot2\\2\cdot1\end{matrix}\right\}=2=1\times2$.

2d, And if three things are proposed to be varied, they may be changed six several ways, as to their order of places, and no more.

For, beginning with 1, there will be $\left\{\begin{matrix}1\cdot2\cdot3\\1\cdot3\cdot2\end{matrix}\right\}$

Next, beginning with 2, there will be $\left\{\begin{matrix}2\cdot1\cdot3\\2\cdot3\cdot1\end{matrix}\right\}$

Again, beginning with 3, it will be $\left\{\begin{matrix}3\cdot1\cdot2\\3\cdot2\cdot1\end{matrix}\right\}$

Which in all make 6 or 3 times 2, *viz.* $1\times2\times3=6$.

3d, Suppose 4 things were supposed to be varied, then they admit of 24 several changes, as to their order of different places.

For, beginning with 1, the order will be $\left\{\begin{matrix}1\cdot2\cdot3\cdot4\\1\cdot2\cdot4\cdot3\\1\cdot3\cdot2\cdot4\\1\cdot3\cdot4\cdot2\\1\cdot4\cdot2\cdot3\\1\cdot4\cdot3\cdot2\end{matrix}\right\}$ Here are 6 different changes.

And for the same reason there will be 6 different changes when 2 begins the order, and as many when 3 and 4 begin the order; which in all is $24=1\times2\times3\times4$. And by this method of proceeding it may be made evident that 5 things admit of 120 several variations or changes; and 6 things of 720, &c. as in this following table:

The

The number of things proposed to be varied.	The manner how their several variations are produced.	The different change or variations every one of the proposed numbers can admit of.
1	1 × 1	= 1
2	1 × 2	= 2
3	2 × 3	= 6
4	6 × 4	= 24
5	24 × 5	= 120
6	120 × 6	= 720
7	720 × 7	= 5040
8	5040 × 8	= 40120
9	40120 × 9	= 362880
10	362880 × 10	= 3628800
11	3628800 × 11	= 39916800
12	39916800 × 12	= 479001600

They may be thus continued on to any assigned number. Suppose to 24, the number of letters in the alphabet, which will admit of 620448401733239439360000 several variations.

CHANGES *of quantities*, in algebra, the same with what is otherwise called combination. See the article COMBINATION.

CHANGE, or EXCHANGE, in matters of commerce. See the article EXCHANGE.

CHANNEL, in architecture, that part of the ionic capital which is under the abacus, and lies open upon the echinus or eggs, which has the centers or turnings on every side to make the volutes.

CHANNEL *of the larmier*, the hollow soffit of a cornice which makes the pendant mouchette. See the article LARMIER.

CHANNEL *of the volute*, in the ionic capital, the face of the circumvolution inclosed by a listel.

CHANNEL, in geography, an arm of the sea, or a narrow sea between two continents, or between a continent and an island. Such are the british channel, St. George's channel, the channel of Constantinople, &c.

CHANNEL *of a river*, the bed of a river. See the article RIVER.

CHANNEL *of the mouth of a horse*, that concavity in the middle of the lower jaw, appointed for a place to the tongue; which being bounded on each side by the bars, terminates in the grinders. It should be large enough not to be pressed with the bit mouth.

CHANNEL, in anatomy. See the article CANAL.

CHANNELINGS, in architecture. See the article FLUTES.

CHANT, *cantus*, a term particularly used for vocal church music.

In ecclesiastical history we find mention made of divers kinds of chants, as, 1. The ambrosian, established by St Ambrose. See the article AMBROSIAN-OFFICE.

2. The gregorian chant, called also the roman chant; which is still retained in churches under the name of plain song; for in this, the choir and people sing in union.

CHANTLATE, in building, a piece of wood fastened near the ends of the rafters, and projecting beyond the wall to support two or three rows of tiles; so placed as to prevent the rain water from trickling down the sides of the walls.

CHANTOR, a singer in the choir of a cathedral. The word is almost grown obsolete, chorister or singing-man being commonly used instead of it.

All great chapters have chantors and chaplains to assist the canons, and officiate in their absence.

CHANTOR is used by way of excellence for the præcentor or master of the choir, which is one of the first dignities of the chapter. At St. David's in Wales, where there is no dean, he is next in dignity to the bishop. The antients called the chantor *primicerius cantorum*. To him belonged the direction of the deacons, and other inferior officers.

Chantors in the temple of Jerusalem, were a number of levites employed in singing the praises of God, and playing upon instruments before his altar. They had no habits distinct from the rest of the people; yet in the ceremony of removing the ark to Solomon's temple, the chantors appeared dressed in tunics of byssus or fine linen. 2 Chron. v. 12.

CHANTRY, or CHAUNTRY, a church

or chappel, endowed with lands, &c. for the maintenance of one or more prieſts to ſay maſs for the ſouls of the donors. Hence,

CHANTRY RENTS, are rents ſtill paid to the crown by the purchaſers of thoſe lands.

CHAOLOGY, denotes the hiſtory or deſcription of the chaos.

It is moſt probable that Moſes was the firſt chaologiſt, and that the greek and latin philoſophers extracted their fabulous repreſentation of the chaos, from the true hiſtory of the creation of the world in the firſt book of Geneſis. Orpheus and Heſiod among the Greeks, and Ovid among the Latins, have given moſt beautiful deſcriptions of the chaos; the laſt mentioned coincides pretty nearly with the account given by Moſes.

We have likewiſe a chaology by Dr. Burnet, in his theory of the earth. See the next article.

CHAOS, that confuſion in which matter lay when newly produced out of nothing at the beginning of the world, before God, by his almighty word, had put it into the order and condition wherein it was after the ſix days creation.

The antient poets, and Ovid in particular, repreſent the chaos thus: that there was neither ſun to make any day, nor moon to enlighten the night; that the earth was not yet hung in the circumambient air, nor the ſea bounded by any ſhore; but that earth, air, and water, were one undigeſted maſs; conſequently, that the earth was not hardened to its proper element, the water was unnavigable, the air groſs and not enlightened, and, in ſhort, there was nothing in the univerſe that had put on its proper form.

All the antient ſophiſts, ſages, &c. hold that chaos was the firſt principle; the poets make him a god, who was the father of all the other gods. Among the moderns, Dr. Burnet repreſents the chaos, out of which the world was framed, to be at firſt intire, undivided, and univerſally rude and deformed; then ſhews how it came divided into its reſpective regions, and obſerves, that, excepting Ariſtotle, and a few others, who aſſerted that the world was always, from eternity, of the ſame form and ſtructure as at preſent, it has been a prevailing opinion in all ages, that what we call the terreſtrial globe, was originally an undigeſted maſs of heterogeneous matter called chaos, and no more than the rudiments and materials of the preſent world. According to Mr. Whiſton, the antient chaos, or origin of our earth, was the atmoſphere of a comet; ſo that every planet with him is a comet, formed into a laſting condition; and a comet is a chaos or planet, unformed in its primeval ſtate.

CHAOS, in the old italic verſion of Luke, cap. xvi. v. 26. is the ſpace between heaven and hell, which the evangeliſt calls χασμα, a gulph or abyſs.

CHAP, among zoologiſts, denotes either of the mandibles of a bird's beak, which are diſtinguiſhed by the epithets *upper* and *lower*. See the article BEAK.

CHAPE, among ſcabbard makers, denotes the metalline plate fixed on the end of a ſcabbard, to prevent the point of the ſword from piercing through it.

CHAPEAU, in heraldry, an antient cap of dignity worn by dukes, being ſcarlet-coloured velvet on the outſide, and lined with a fur.

It is frequently borne above an helmet inſtead of a wreath, under gentlemen's creſts.

CHAPEL, or CHAPPEL, a place of divine worſhip, ſerved by an incumbent under the denomination of a chaplain.

In England there are ſeveral ſorts, 1. Parochial chapels, which, differing from pariſh churches only in the name, are generally ſmall, as the inhabitants within the diſtrict are few. If there be a preſentation *ad eccleſiam* inſtead of *ad capellam*, and an admiſſion and inſtitution upon it, it is no longer a chapel, but a church. 2. Chapels which adjoin to and are part of the church; ſuch were formerly built by honourable perſons, as burying places for themſelves and their families. 3. Chapels of eaſe, built in very large pariſhes for the conveniency of ſuch as cannot repair to the pariſh church. Theſe are ſerved by inferior curates provided at the charge of the rector, and conſequently removeable at his pleaſure. Chapels of eaſe, however, may be parochial, and have a right to ſacraments and burials, and to a diſtinct miniſter by cuſtom, tho' ſubject in ſome reſpects to the mother-church. In ſome places they are endowed with lands or tythes, and in other places ſupported by voluntary contributions. 4. Free chapels, ſuch as were founded by the kings of England, free from all epiſcopal juriſdiction, and to be viſited only by the founder and his ſucceſſors: the viſitation is made by the

lord chancellor. The king likewiſe may licenſe any ſubject to build and endow a chapel, and, by letters patent, exempt it from the viſitation of the ordinary. 5. Chapels in univerſities belonging to particular colleges, which, tho' conſecrated, and though ſacraments are adminiſtred there, are not liable to the viſitation of the biſhop. 6. Domeſtic chapels, built by gentlemen for the private ſervice of God in their own families. Theſe may be erected without the leave of the biſhop, and need not be conſecrated, tho' they were antiently: they are not ſubject to the viſitation of the ordinary.

CHAPEL is alſo a name given to a printer's work-houſe, in which ſenſe they ſay, the laws of the chapel, the ſecrets of the chapel.

Knights of the CHAPEL, called alſo poor knights of Windſor, were inſtituted by Henry VIII. in his teſtament. Their number was at firſt thirteen, but has been ſince augmented to twenty-ſix. They aſſiſt in the funeral ſervices of the kings of England: they are ſubject to the office of the canons of Windſor, and live on penſions aſſigned them by the order of the garter. They bear a blue or red cloke, with the arms of St. George on the left ſhoulder.

CHAPELET, in the manege, a couple of ſtirrup-leathers, mounted each of them with a ſtirrup, and joined at top in a ſort of leather buckle, called the head of the chapelet, by which they are made faſt to the pummel of the ſaddle, after being adjuſted to the rider's length and bore. They are uſed both to avoid the trouble of taking up or letting down the ſtirrups, every time that the gentleman mounts on a different horſe and ſaddle, and to ſupply the place of the academy ſaddles, which have no ſtirrups to them.

CHAPELRY, the precinct belonging to a chapel, in contradiſtinction from a pariſh, or that belonging to a church. See the article PARISH.

CHAPERON, a covering for the head, formerly worn both by men and women. Hence it became the name of thoſe little ſhields containing death's heads, and other funeral devices, placed upon the foreheads of horſes that drew hearſes at pompous funerals. The chaperon is now the badge of a doctor or licentiate in divinity, law, or phyſic, in France, and worn by them on the left arm, being of the ſame form with that which in antient days was worn on the head.

CHAPERON is likewiſe the name that diſtinguiſhed two factions in France. The firſt aroſe in the reign of king John in 1358, and the ſecond under Charles VI. in 1413.

CHAPERON *of a bit mouth*, ſignifies the end of the bit that joins to the branch juſt by the banquet. In ſcatch mouths, the chaperon is round, in others it is oval.

CHAPETONS, *chapetones*, a name given by the Spaniards to the european inhabitants of America, in contradiſtinction from the creols, or thoſe born there.

CHAPITERS, in architecture, the ſame with capitals. See the article CAPITAL.

CHAPITERS, in law, formerly ſignified a ſummary of ſuch matters as were inquired of, or preſented before juſtices in eyre, juſtices of aſſize or of the peace, in their ſeſſions.

Chapiters, at this time, denote ſuch articles as are delivered by the mouth of the juſtice in his charge to the inqueſt. Bracton and Breton ſay, that they were after an exhortation from the juſtices, firſt read in open court, and then delivered in writing to the grand inqueſt, who were to anſwer upon oath to all the particular articles. In ſome courts-leet in ſeveral parts of England, it is uſual for the ſtewards to deliver their charge in writing to the juries ſworn to inquire of offences.

CHAPLAIN, an eccleſiaſtic who officiates in a chapel. See the article CHAPEL.

The king of Great-Britain hath forty-eight chaplains in ordinary, uſually eminent doctors in divinity, who wait four each month, preach in the chapel, read the ſervice to the family, and to the king in his private oratory, and ſay grace in the abſence of the clerk of the cloſet. Beſides, there are twenty-four chaplains at Whitehall, fellows of Oxford or Cambridge, who preach in their turns, and are allowed thirty pounds *per annum* each. According to a ſtatute of Hen. VIII. the perſons veſted with a power of retaining chaplains, together with the number each is allowed to qualify, is as follows: An archbiſhop, eight; a duke or biſhop, ſix; marqueſs or earl, five; viſcount, four; baron, knight of the garter, or lord chancellor, three; a dutcheſs, marchioneſs, counteſs, baroneſs, the treaſurer and comptroller of the king's houſe, clerk of the cloſet, the king's ſecretary, dean of the chapel, almoner and maſter of the rolls, each of them two; chief juſtice of the king's bench, and warden

of

of the cinque ports, each one. All theſe chaplains may purchaſe a licence or diſpenſation, and take two benefices with cure of ſouls. A chaplain muſt be retained by letters teſtimonial under hand and ſeal; for it is not ſufficient that he ſerve as chaplain in the family.

CHAPLAINS *of the pope*, are the auditors or judges of cauſes in the ſacred palace. They were originally as many as the pope pleaſed to ſummon, but Sixtus IV. reduced their number to twelve. It is from their decrees that the body of decretals is formed.

CHAPLAIN *of the order of Malta*, otherwiſe called diaco, and clerk conventual, the ſecond claſs of the order of Malta. The knights make the firſt rank.

CHAPLET, a ſtring of beads uſed by the roman catholics to count the number of their prayers. The invention of it is aſcribed to Peter the hermit, who probably learned it of the Turks, as they owe it to the Eaſt-Indians.

Chaplets are ſometimes called paternoſters, and are made of coral, of diamonds, of wood, &c. The common chaplet contains fifty ave-marias, and five pater-noſters. There is alſo a chaplet of our Saviour, conſiſting of thirty-three beads, in honour of his thirty-three years living on earth, inſtituted by father Michael the Camaldulian. Dandini obſerves, that the mahometan chaplets differ from thoſe of the roman catholics, in that they are all of the ſame bigneſs, and have not that diſtinction into decads, though they conſiſt of ſixty beads. The devotees of the ſect of Fo in China, always wear a chaplet about their necks, and round their arms, conſiſting of 100 middle-ſized beads, and eight conſiderably larger; and all the while they are tumbling over theſe beads, they repeat *na-mo-o mi-to-fo*. See ROSARY.

CHAPLET, in architecture, a ſmall ornament carved into round beads, pearls, olives, and pater-noſters, as is frequently done in baguettes. See BAGUETTE.

CHAPPAR, a courier of the king of Perſia, who carries diſpatches between the court and the provinces. When he ſets out, the maſter of the horſe furniſhes him with a ſingle horſe, and when that is weary, he diſmounts the firſt horſeman he meets, and takes his horſe. There is no pardon for a traveller that ſhould refuſe to let a chappar have his horſe, nor for any other that ſhould deny him the beſt horſe of his ſtable.

CHAPPE', in heraldry, the dividing an eſcutcheon by lines drawn from the center of the upper edge to the angles below, into three parts, the ſections on the ſides being of a different metal or colour from the reſt.

CHAPPEL, or CHAPEL. See CHAPEL.

CHAPPEL in the FRITH, a market-town of Derbyſhire, about twenty ſix miles north-weſt of Derby: weſt longitude 1° 50′, north latitude 53° 22′.

CHAPTER, *capitulum*, in eccleſiaſtical policy, a ſociety or community of eccleſiaſtics belonging to a cathedral or collegiate church.

It was in the eighth century that the body of canons began to be called a chapter. The chapter of the canons of a cathedral, were a ſtanding council to the biſhop, and during the vacancy of the ſee, had the juriſdiction of the dioceſe. In the earlier ages, the biſhop was head of the chapter: afterwards abbots and other dignitaries, as deans, provoſts, treaſurers, &c. were preferred to this diſtinction. The deans and chapters had the privilege of chuſing the biſhops in England, but Henry VIII. got this power veſted in the crown: and as the ſame prince expelled the monks from the cathedrals, and placed ſecular canons in their room, thoſe he thus regulated were called deans and chapters of the new foundation: ſuch are Canterbury, Winchester, Ely, Carliſle, &c.

CHAPTER is alſo applied to aſſemblies held by religious and military orders for regulating their affairs, and alſo to the hall where ſuch aſſemblies are convoked. In monaſteries, the chapter is uſually in the middle of the cloiſters.

CHAPTER, in matters of literature, a diviſion in a book, for keeping the ſubject treated of more clear and diſtinct. St. Auguſtine compares them to inns, inaſmuch as they refreſh the reader as theſe the traveller.

The three CHAPTERS, a famous phraſe in eccleſiaſtical hiſtory, ſignifying a volume by Theodoret, an adherent of Neſtorius, againſt St. Cyril. Theſe chapters conſiſt of a letter of Ibas, prieſt of Edeſſa, to Maris biſhop of Perſia; of extracts from the works of Diodorus of Tarſus, and Theodore of Mopſueſtia, wherein the ſame doctrines were taught that were contended for by Neſtorius; and of two pieces of Theodoret, the one againſt the council of Epheſus, the other againſt the anathemas of St. Cyril. The three chapters

ters have been condemned by various councils, and many popes.

CHAPTREL, in architecture, the ſame with impoſt. See the article IMPOST.

CHAR, or CHARRE, in ichthyology. See the article CHARRE.

CHARA, in botany, a genus of plants belonging to the claſs of the cryptogamia-algarum, without either flower-petals, or pericarpium, having a ſingle ovato-oblong ſeed. Linnæus diſtinguiſhes four ſpecies of the chara, but there are no medicinal virtues aſcribed to either of them.

CARABON, a ſea-port town on the northern coaſt of the iſland of Java, in the indian ocean, ſituated 130 miles eaſt of Batavia: eaſt long. 108°, ſouth lat. 6°.

CHARACTER, χαρακτηρ, in a general ſenſe, denotes any mark whatever, ſerving to repreſent either things or ideas: thus letters are characters, types, or marks of certain ſounds; words, of ideas, &c. See the article LETTER, &c.

Characters are of infinite advantage in almoſt all ſciences, for conveying, in the moſt concile and expreſſive manner, an author's meaning: however, ſuch a multiplicity of them, as we find uſed by different nations, muſt be allowed to be a very conſiderable obſtacle to the improvement of knowledge; ſeveral authors have therefore attempted to eſtabliſh characters that ſhould be univerſal, and which each nation might read in their own language, and, conſequently, which ſhould be real, not nominal, or arbitrary, but expreſſive of things themſelves; thus, the univerſal character for a horſe, would be read by an Engliſhman *horſe*, by a Frenchman *cheval* by the Latins *equus*, by the Greeks ἱππος, &c.

The firſt who made any attempts for an univerſal character in Europe, were biſhop Wilkins and Dalgarme: Mr. Leibnitz alſo turned his thoughts that way; and Mr. Lodwic, in the Philoſophical Tranſactions, gives a plan of an univerſal character, which was to contain an enumeration of all ſuch ſingle ſounds as are uſed in any language. The advantages he propoſed to derive from this character were, that people would be enabled to pronounce truly and readily any language that ſhould be pronounced in their hearing; and laſtly, that this character would ſerve as a ſtandard to perpetuate the bounds of every language whatſoever.

In the Journal Literaire of 1720, there is a project for an univerſal character, by means of the common arabic or numeral figures: the combinations of theſe nine, ſays the author, is ſufficient to expreſs diſtinctly, an incredible quantity of numbers, much more than we ſhall need terms to ſignify our actions, goods, evils, duties, paſſions, &c. and the arabic figures having already all the univerſality required, the trouble is already ſaved of framing and learning any new character. But here the difficulty is not ſo great to invent the moſt ſimple, eaſy, and convenient characters, as to engage different nations to uſe theſe characters.

Literal characters may be divided, with reſpect to the nations among whom they have been invented, into greek characters, roman characters, hebrew characters, &c. See the article ALPHABET.

The latin character, now uſed through all Europe, was formed from the greek, as the greek was from the phœnician, and the phœnician, as well as the chaldee, ſyriac, and arabic characters, were formed from the antient hebrew, which ſubſiſted till the babyloniſh captivity; for after that event, the character of the Aſſyrians, which is the ſquare hebrew now in uſe, prevailed, the antient being only found on ſome hebrew medals, commonly called ſamaritan medals. It was in 1091 that the gothic characters, invented by Ulfilas, were aboliſhed, and the latin ones eſtabliſhed in their room. See the article LETTER.

Medalliſts obſerve, that the greek character, conſiſting only of majuſcule letters, has preſerved its uniformity on all medals, as low as the time of Gallienus; from that time it appears ſomewhat weaker and rounder: from the time of Conſtantine to Michael we find only latin characters; and after Michael the greek characters recommence; but from that time they begin to alter with the language, which was a mixture of greek and latin. The latin medals preſerve both their character and language as low as the tranſlation of the ſeat of the empire to Conſtantinople: towards the time of Decius the character began to loſe its roundneſs and beauty; ſome time after it retrieved, and ſubſiſted tolerably till the time of Juſtin, when it degenerated gradually into the gothic. The rounder, then, and better formed a character is, upon

upon a medal, the fairer pretence it has to antiquity.

CHARACTER is alſo uſed, in ſeveral of the arts, for a ſymbol, contrived for the more conciſe and immediate conveyance of the knowledge of things. We ſhall here ſubjoin the principal of them.

CHARACTERS *uſed in algebra and arithmetic.*

a, *b*, *c*, *d*, &c. the firſt letters of the alphabet, are the characters of given quantities; and *z*, *y*, *x*, &c. the laſt letters, are the characters of quantities ſought. See the article ALGEBRA.

m, *n*, *r*, *s*, *t*, &c. are characters of indeterminate exponents both of ratios and of powers: thus, x^m, y^n, z^r, &c. denote undetermined powers of different kinds; *mx*, *ny*, *rz*, different multiples or ſubmultiples of the quantities *x*, *y*, *z*, according as *m*, *n*, *r*, are either whole numbers or fractions.

+ is the ſign of the real exiſtence of the quantity it ſtands before, and is called an affirmative or poſitive ſign. It is alſo the mark of addition, and is read *plus*, or more; thus, *a*+*b*, or 3+5, implies *a* is added to *b*, or 3 added to 5.

— before a ſingle quantity is the ſign of negation or negative exiſtence, ſhewing the quantity to which it is prefixed to be leſs than nothing. But between quantities it is the ſign of ſubtraction, and is read *minus*, or leſs; thus, *a*—*b*, or 8—4, implies *b* ſubtracted from *a*, or 8 after 4 has been ſubtracted.

= is the ſign of equality, though Des Cartes and ſome others uſe this mark ∞; thus, *a*=*b* ſignifies that *a* is equal to *b*. Wolfius, and ſome others, uſe the mark ≡ for the identity of ratios.

× is the ſign of multiplication, ſhewing that the quantities on each ſide the ſame are to be multiplied by one another, as *a*×*b* is to be read *a* multiplied into *b*; 4×8, the product of 4 multiplied into 8. Wolfius and others make the ſign of multiplication a dot between the two factors; thus 5·4 ſignifies the product of 5 and 4. In algebra the ſign is commonly omitted, and the two quantities put together; thus *b d* expreſſes the product of *b* and *d*. When one or both of the factors are compounded of ſeveral letters, they are diſtinguiſhed by a line drawn over them; thus, the factum of *a*+*b*—*c* into *d*, is wrote $d \times \overline{a+b-c}$. Leibnitz, Wolfius, and others diſtinguiſh the compound factors by including them in a parentheſis thus (*a*+*b*—*c*) *d*.

÷ is the ſign of diviſion; thus, *a*÷*b* denotes the quantity *a* to be divided by *b*. In algebra the quotient is often expreſſed like a fraction, thus, $\frac{a}{b}$ denotes the quotient of *a* divided by *b*. Wolfius makes the ſign of diviſion two dots; thus 12 : 4 denotes the quotient of 12 divided by 4 = 3. If either the diviſor or dividend, or both, be compoſed of ſeveral letters, for example, *a*+*b*÷*c*, inſtead of writing the quotient like a fraction, $\frac{a+b}{c}$, Wolfius includes the compound quantities in a parentheſis, thus (*a*+*b*) : *c*.

∽ is the character of involution; ≀ is the character of evolution.

≻ or ⊏ are ſigns of majority; thus, *a* ≻ *b* expreſſes that *a* is greater than *b*.

≺ or ⊐ are ſigns of minority; and when we would denote that *a* is leſs than *b*, we write *a* ≺ *b*, or *a* ⊐ *b*.

∞ is the character of ſimilitude uſed by Wolfius, Leibnitz, and others: it is uſed in other authors for the difference between two quantities while it is unknown which is the greater of the two.

: : is the mark of geometrical proportion disjunct, and is uſually placed between two pair of equal ratios, as, 3 : 6 : : 4 : 8, ſhews that 3 is to 6 as 4 is to 8.

∴ the mark of geometrical proportion continued, implies the ratio to be ſtill carried on without interruption, as 2, 4, 8, 16, 32, 64 ∴ are in the ſame uninterrupted proportion.

√ is the character of radicality, and ſhews, according to the index of the power that is ſet over it, or after it, that the ſquare, cube, or other root is extracted, or to be extracted; thus, √ 16, or $\sqrt{}^2 16$ or √ (2) 16, is the ſquare root of 16. $\sqrt{}^3 25$, the cube root of 25, &c. This character ſometimes affects ſeveral quantities, diſtinguiſhed by a line drawn over them thus, $\sqrt{\overline{b+d}}$ denotes the ſum of the ſquare roots of *b* and *d*. When any term, or terms, of an equation are wanting, they are generally ſupplied by one or more aſteriſms: thus in the equation $\left.\begin{matrix} y^2+py+\frac{1}{2}p^2+q \\ -py-\frac{1}{2}p^2 \end{matrix}\right\} = 0$, the term ± *py* vaniſhing, is marked with an aſteriſm, as $y^2 * -\frac{1}{4}p^2+q$.

CHA-

CHARACTERS *used in aſtronomy.*

Characters of the planets.

♄ Saturn	☉ Sun	☾ Moon
♃ Jupiter	♀ Venus	⊕ Earth
♂ Mars	☿ Mercury.	

Of the ſigns.

♈ Aries	♌ Leo	♐ Sagittarius
♉ Taurus	♍ Virgo	♑ Capricornus
♊ Gemini	♎ Libra	♒ Aquarius
♋ Cancer	♏ Scorpio	♓ Piſces.

Of the aſpects.

☌ or S Conjunction	△ Trine
SS Semiſextile	Bq Biquintile
⚹ Sextile	Vc Quincunx
Q Quintile	☍ Oppoſition
□ Quartile	☊ Dragon's head
Td Tredecile	☋ Dragon's tail.

Of time.

A. M. *ante meridiem*, before the ſun comes upon the meridian.

Q. or N. noon.

P. M. *poſt meridiem*, when the ſun is paſt the meridian.

CHARACTERS *in commerce.*

D° *ditto*, the ſame	qrs quarters
N° *numero*, or number	S or *s* ſhillings
F° *folio*, or page	*d* pence or deniers
R° *recto* } *folio*	lb pound weight
V° *vero* }	℔, *per*, or by, as ℔ *ann.* by the year,
£. or *l.* pounds ſterling	℔ *cent.* Rx rixdollar
C or ⊕ hundred weight, or 112 pounds	D^{d} ducat
	P. S. poſtſcript, &c.

CHARACTERS *in chemiſtry.*

♁ antimony	♃ jupiter, tin
Æ aqua fortis	♄ ſaturn, lead
Æ aqua regia	☿ mercury
MB balneum mariæ	☿ ſublimate
Ψ calx viva	☿ precipitate
☋ caput mortuum	☊ nitre
♀ venus, copper	✻ ſal armoniac
⊖ common ſalt	♍ vitriol
♂ diſtillation	♎ ♐ ſulphur
☉ ſol, gold	^{R}V ſpirit of wine
C C hart's horn	^{R}V or S.V.R. ſpirit of wine rectified
C C C hart's horn calcined	☾ luna, ſilver
♂ mars, iron	♑ tartar
ſ. ſ. ſ. ſtratum ſuper ſtratum.	*aaa* amalgamate.

There are many more characters in chemiſtry, but theſe are the moſt uſual.

CHARACTERS *in geometry and trigonometry.*

‖ The character of parallelism	□ ſquare
△ triangle	▯ ▭ rectangle
	⊙ circle
∨ equiangular, or ═ ſimilar	∠ an angle
	∟ right angle
⊥ equilateral	⊥ perpendicular

° denotes a degree; thus 45°, implies 45 degrees. ′ a minute; thus, 30′, is 50 minutes. ″, ‴, ⁗, denote ſeconds, thirds, and fourths: and the ſame characters are uſed where the progreſſions are by tens, as it is here by ſixties.

CHARACTERS *in grammar, rhetoric, poetry, &c.*

( ) parentheſis	SS. T. D. doctor in divinity
[ ] crotchet	
- hyphen	V. D. M. miniſter of the word of God
' apoſtrophe	
' emphaſis or accent	
˘ breve	LL. D. doctor of laws
¨ dialyſis	J. V. D. doctor of civil and canon law
^ caret and circumflex	
" quotation	M. D. doctor in phyſic
† ‡ and * references	
§ ſection or diviſion	A. M. maſter of arts
¶ paragraph	A. B. bachelor of arts

F. R. S. fellow of the royal ſociety.

For the other characters uſed in grammar, ſee the articles COMMA, COLON, SEMICOLON, &c.

CHARACTERS *uſed in the arithmetic of infinites.*

. the character of an infiniteſimal or fluxion; thus, $\dot{x}$, $\dot{y}$, &c. expreſs the fluxions or differentials of the variable x and y; and two, three, or more dots denote ſecond, third, or higher fluxions. M. Leibnitz, inſtead of a dot, prefixes the letter *d* to the variable quantity, in order to avoid the confuſion of dots in the differencing of differentials. See the article CALCULUS DIFFERENTIALIS.

CHARACTERS *among the antient lawyers, and in antient inſcriptions.*

§ paragraphs	P. P. pater patriæ
ff digeſts	C. code
Scto ſenatus conſulto	C. C. conſules
	T. titulus
E. extra	P. P. D. D. propria pecunia dedicavit
S. P. Q. R. ſenatus populuſque romanus	D. D. M. dono dedit monumentum

CHARACTERS *in medicine and pharmacy.*

℞ recipe	ß or *ſs*, half of any thing
á, *ää*, or ana, of each alike	cong. congius, a gallon
lb a pound or a pint	coch. cochleare, a ſpoonful
℥ an ounce	M. manipulus, a handful
ʒ a drachm	
℈ a ſcruple	
gr. grains	

P. a pugil
P. Æ. equal quantities
S. A. according to art
q. s. a ſufficient quantity
q. pl. as much as you pleaſe
P. P. pulvis patrum, the jeſuit's bark.

CHARACTERS uſed in muſic, and of muſical notes, with their proportions, are as follow.

character of a		minim	1/2
large	8	crotchet	1/4
a long	4	quaver	1/8
a breve	2	ſemiquaver	1/16
a ſemibreve	1	demiſemiquaver	1/32

♯ character of a ſharp note: this character at the beginning of a line, or ſpace, denotes that all the notes in that line are to be taken a ſemitone higher, than in the natural ſeries; and the ſame affects all the octaves above or below, though not marked: but when prefixed to any particular note, it ſhews that note alone to be taken a ſemitone higher than it would be without ſuch character.

♭ or *b*, character of a flat note: this is the contrary to the other above, that is, a ſemitone lower.

♮ character of a natural note: when in a line or ſeries of artificial notes, marked at the beginning ♭ or ♯, the natural note happens to be required, it is denoted by this character.

𝄞 character of the treble cliff.

𝄡 character of the mean cliff.

𝄢 baſs cliff.

$\frac{2}{2}$, or $\frac{2}{4}$, or $\frac{4}{8}$, characters of common duple time; ſignifying the meaſure of two crotchets to be equal to two notes, of which four make a ſemibreve.

C ¢ ¢ characters that diſtinguiſh the movements of common time, the firſt implying ſlow, the ſecond quick, and the third very quick.

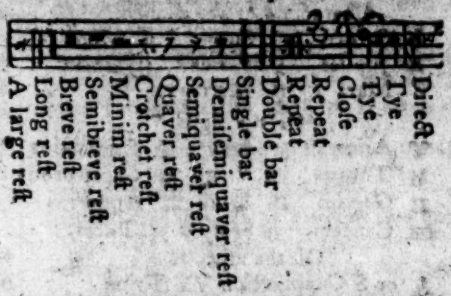
$\frac{1}{2}$, $\frac{3}{2}$, $\frac{3}{4}$, $\frac{3}{8}$, $\frac{3}{16}$, characters of ſimple triple time, the meaſure of which is equal to three ſemibreves, or to three minims.

$\frac{6}{2}$, or $\frac{6}{8}$, or $\frac{6}{16}$, characters of mixed triple time, where the meaſure is equal to ſix crotchets or ſix quavers.

$\frac{9}{4}$, or $\frac{9}{8}$, or $\frac{9}{16}$, or $\frac{9}{1}$, or $\frac{9}{2}$, characters of compound triple time.

$\frac{12}{2}$, $\frac{12}{8}$, $\frac{12}{16}$, or $\frac{12}{1}$, or $\frac{12}{2}$, characters of that ſpecies of triple time called the meaſure of twelve times. See the article TRIPLE.

Characters of the reſts or pauſes of time.



Numeral CHARACTERS uſed to expreſs numbers, are either letters or figures. The arabic character, called alſo the common one, becauſe it is uſed almoſt throughout Europe in all ſorts of calculations, conſiſts of theſe ten digits, 1, 2, 3, 4, 5, 6, 7, 8, 9, 0.

The roman numeral character conſiſts of ſeven majuſcule letters of the roman alphabet, *viz.* I, V, X, L, C, D, M. The I denotes one, V five, X ten, L fifty, C a hundred, D five hundred, and M a thouſand.

The I repeated twice makes two, II; thrice, three, III; four is expreſſed thus IV, as I before V or X takes an unit from the number expreſſed by theſe letters. To expreſs ſix an I is added to a V, VI; for ſeven, two, VII; and for eight, three, VIII: nine is expreſſed by an I before X, thus IX.

The ſame remark may be made of the X before L or C, except that the diminution is by tens; thus, XL denotes forty, XC ninety, and LX ſixty. The C before D or M diminiſhes each by a hundred.

The number five hundred is ſometimes expreſſed by an I before a C inverted, thus, IↃ; and inſtead of M, which ſignifies a thouſand, an I is ſometimes uſed between two C's, the one direct, and the other inverted, thus CIↃ. The addition of C and Ↄ before or after, raiſes CIↃ by tens, thus, CCIↃↃ, expreſſes ten thouſand, CCCIↃↃↃ, a hundred thouſand.

The Romans alſo expreſſed any number of thouſands by a line drawn over any numeral leſs than a thouſand; thus, $\overline{V}$ denotes five thouſand, $\overline{LX}$ ſixty thouſand: ſo likewiſe $\overline{M}$ is one million, $\overline{MM}$ is two millions, *&c.*

Some modern writers have admitted variations in this method of notation; thus we find IIX expreſſing eight, IIIX eighty.

eighty-nine, Ⱥ or Ⅴ denoting IↃↃ, and ∞ or ⅭIↃ standing for CIↃ; whence ↀ ten thouſand, ↀↀ twenty thouſand.

The Greeks had three ways of expreſſing numbers: firſt, every letter according to its place in the alphabet, denoted a number, from α, one, to ω, twenty-four. 2. The alphabet was divided into eight units, α one, β two, γ three, &c. into eight tens, ι ten, κ twenty, λ thirty, &c. and eight hundreds, ρ one hundred, σ two hundred, τ three hundred, &c. 3. I ſtood for one, Π (πεντε) five, Δ (δεκα) ten, H (Ἑκατον) a hundred, Χ (χιλια) a thouſand, Μ (μυρια) ten thouſand; and when the letter Π incloſed any of theſe, except I, it ſhewed the incloſed letter to be five times its value; as ⱭⱭ fifty, ⱭⱭ five hundred, ⱭⱭ five thouſand, ⱭⱭ fifty thouſand.

The hebrew numerals conſiſted of their alphabet divided into nine units; thus, א one, ב two, &c. nine tens; thus, י ten, כ twenty, &c. nine hundreds; thus, ק one hundred, ר two hundred, &c. and ך five hundred, ם ſix hundred, ן ſeven hundred, ף eight hundred, ץ nine hundred. They expreſſed thouſands by the word אלפ, with the other numerals prefixed to ſignify the number of thouſands: thus, אלפים two thouſand, גאלפים three thouſand, &c.

French CHARACTER, uſed in the chamber of accounts, and by perſons concerned in the management of the revenue, is, properly ſpeaking, nothing elſe than the roman numerals, in letters that are not majuſcule: thus, inſtead of expreſſing fifty-ſix by LVI, they denote it by ſmaller characters lvj.

CHARACTER, in natural hiſtory. See the article GENUS.

CHARACTERS, among printers. See the articles LETTER and CORRECTION.

CHARACTERS *upon tomb-ſtones.*

S. V. Siſte viator, *i. e.* Stop traveller.

M. S. Memoriæ ſacrum, *i. e.* Sacred to the memory.

D. M. Diis manibus.

I H S. Jeſus.

X. P. a character found in the catacombs in Italy, about the meaning of which authors are not agreed. See CATACOMB.

CHARACTER, in epic and dramatic poetry, that which is peculiar in the manners of any perſon, and diſtinguiſhes him from all others.

The poetical character, ſays Mr. Boſſu, is not properly any particular virtue or quality, but a compoſition of ſeveral which are mixed together, in a different degree, according to the neceſſity of the fable, and the unity of the action: there muſt be one, however, to reign over all the reſt, and this muſt be found in ſome degree in every part. This firſt quality in Achilles is wrath, in Ulyſſes diſſimulation, and in Æneas mildneſs. But as theſe characters cannot be alone, they muſt be accompanied with others to embelliſh them, as far as they are capable, either by hiding their defects, as in the anger of Achilles, which is palliated by extraordinary valour; or by making them center in ſome ſolid virtue, as in Ulyſſes, whoſe diſſimulation makes a part of his prudence; and in Æneas, whoſe mildneſs is employed in a ſubmiſſion to the will of the gods. In the making up of which union, it is to be obſerved, the poets have joined together ſuch qualities as are by nature the moſt compatible, valour with anger, piety with mildneſs, and prudence with diſſimulation. The fable required prudence in Ulyſſes, and piety in Æneas; in this, therefore, the poets were not left to their choice: but Homer might have made Achilles a coward, without abating any thing from the juſtneſs of his fable; ſo that it was the neceſſity of adorning his character that obliged him to make him valiant: the character, then, of a hero in the epic poem is compounded of three ſorts of qualities, the firſt eſſential to the fable; the ſecond embelliſhments of the firſt; and valour, which ſuſtains the other two, makes the third.

Unity of character is as neceſſary as the unity of the fable; for this purpoſe a perſon ſhould be the ſame from the beginning to the end; not that he is always to betray the ſame ſentiments or one paſſion, but that he ſhould never ſpeak nor act inconſiſtently with his fundamental character. For inſtance, the weak may ſometimes ſally into a warmth; and the breaſt of the paſſionate be calm; a change, which often introduces in the drama a very affecting variety: but if the natural diſpoſition of the former was to be repreſented as boiſterous, and that of the latter mild and ſoft, they would both act out of character, and contradict their perſons.

True characters are ſuch as we truly and really ſee in men, or may exiſt without any contradiction to nature: no man

queſtions but there have been men as generous and as good as Æneas, as paſſionate and as violent as Achilles, as prudent and wiſe as Ulyſſes, as impious and atheiſtical as Mezentius, and as amorous and paſſionate as Dido: all theſe characters, therefore, are true, and nothing but juſt imitations of nature. On the contrary, a character is falſe, when an author ſo feigns it, that one can ſee nothing like it in the order of nature, wherein he deſigns it ſhall ſtand: theſe characters ſhould be wholly excluded from a poem, becauſe tranſgreſſing the bounds of probability and reaſon, they meet with no belief from the readers. They are fictions of the poet's brain, not imitations of nature; and yet all poetry eſſentially conſiſts in an imitation of nature.

CHARACTER is alſo uſed by divines, eſpecially thoſe of the romiſh church, for an indelible mark which the ſacraments of baptiſm, confirmation, and ordination leave behind them, in thoſe who receive them.

Dr. Forbes, in Irenic. lib. ii. cap. 11. explains the ſenſe of the antients touching the indelible character in a man that is depoſed, by which he is diſtinguiſhed from other laymen: but to make this diſtinction, it is not neceſſary, there ſhould be any form impreſſed, but a tranſient act, that is long ago paſt, is ſufficient, *viz.* that he was once a perſon ordained. The character that remains in a depoſed perſon, is not the character of any preſent office or power, but only ſome footſtep or mark of an honour that is paſt, and of a power that he once had; by which footſtep he is diſtinguiſhed from other laymen who never were ordained; and may, after a ſufficient penance performed, if he be found fit, and the advantage of the church ſo require, be reſtored again without a new ordination.

CHARACTERISTIC, in a general ſenſe, a peculiar mark, or character, whereby a perſon or thing is diſtinguiſhed from all others.

Grammarians uſe the term characteriſtic, in a more limited ſenſe, for the principal letter of a verb, preſerved through all its moods, and tenſes, derivatives and compounds: ſuch is the letter *w* in the word *brew*.

The characteriſtic letter is of moſt uſe in the formation of greek verbs, as being always the ſame in the correſponding tenſes of the ſame conjugation, that is, in thoſe formed from the preſent, future, or preterit. See the articles VERB, MOOD, TENSE, &c.

CHARACTERISTIC *of a logarithm*, the ſame with its index or exponent.

CHARACTERISTIC *of a curve*, in the higher geometry, a rectilinear right angled triangle, whoſe hypothenuſe makes a part of the curve, not ſenſibly different from a right line.

It is ſo called, becauſe curve lines are uſed to be diſtinguiſhed hereby.

CHARADRIUS, in ornithology, a genus of birds of the order of the ſcolopaces, the characters of which are theſe: the beak is ſhort, of a cylindrical or rounded ſhape, and obtuſe at the extremity; and there are only three toes on each foot, which are connected together.

To this genus belong, 1. The plover variegated with black and yellow. 2. The green plover. 3. The morinellus of authors. 4. The hiaticula, or ſea-lark. 5. The lahul, or lapland-plover, with a reddiſh-brown belly, the upper part of the head blackiſh, and the neck, back, wings, and tail grey, variegated with ſpots of red.

CHARAG, the tribute which the chriſtians and jews pay to the grand ſignior.

It is generally a piſtole a head, and ſometimes four crowns. The chriſtians who come to travel in Turky, pay it at the firſt town they arrive at: others begin to pay it at nine or ſixteen years old; but women, prieſts, rabbins, and religious, are exempted.

CHARAX, in ichthyology, the name by which ſeveral authors call the cyprinus, with twenty rays in the back-fin, and with the ſide-line ſtraight.

CHARBON, in the manege, that little black ſpot or mark which remains after a large ſpot in the cavity of the corner teeth of a horſe: about the ſeventh or eighth year, when the cavity fills up, the tooth being ſmooth and equal, it is ſaid to be raſed.

CHARCAS, the ſouthern diviſion of Peru, in South America, remarkable for the ſilver-mines of Potoſi.

CHARCOAL, a kind of fuel, conſiſting of half-burnt wood, much uſed by artificers of different profeſſions; and that not only as fuel, but for poliſhing braſs or copper plates, &c.

The beſt charcoal for common uſes is that made of oak; but in the manufacture of gunpowder they commonly uſe charcoal made of alder. See GUNPOWDER.

Charcoal, by reaſon of the humidity of the

the wood being moſtly diſſipated and exhaled in the fire, wherein it is prepared, makes a ſtrong clear fire without ſmoke.

The Philoſophical Tranſactions give an account of ſome microſcopical obſervations upon charcoal; which is found to contain a ſurprizing number of pores, diſpoſed in order, and traverſing lengthwiſe: in a piece, the 18th part of an inch long, Dr. Hook reckoned 150 pores; whence he concludes, that in one of an inch diameter there are not leſs than 5,724,000 pores, ſo that there is no piece of charcoal, how long ſoever, but may be eaſily blown through. If a piece be broke pretty ſhort, it may be ſeen through by a microſcope. It is to this prodigious number of pores, that the blackneſs of charcoal is owing; for the rays of light, ſtriking on the charcoal, are received and abſorbed in its pores, inſtead of being reflected; whence the body muſt of neceſſity appear black; blackneſs in a body being no more than want of reflection.

The vapour of charcoal or ſea-coal, in a cloſe room, is fatal. It is the more dangerous, becauſe it comes without any ill ſmell, and ſteals on by little and little, cauſing only a faintneſs, without any manifeſt ſtrangling.

The effect, no doubt, is wrought by the inſpiſſation of the air; or rather by deſtroying its elaſtic power.

CHARDS *of artichoaks*, in gardening, the leaves of fair artichoak-plants, tied and wrapped up in ſtraw all over, but the top, during the autumn and winter; this makes them grow white, and loſe ſome of their bitterneſs.

CHARDS *of beets*, white beets covered over with dry dung, during the winter ſeaſon, when they produce large tops, with a downy cotton ſhoot, which is the true chard to be uſed in pottages, intermeſſes, &c.

CHARENTE, a river of France, which, ariſing in the Limoſin, runs weſtward by Angouleſme and Saintes, falling into the bay of Biſcay, oppoſite to the iſle of Oleron.

CHARENTON, the name of two towns in France, the one upon the Marmaude, in the Bourbonois; the other in the iſle of France, near the confluence of the Marne with the Seine, about three miles ſouth-eaſt of Paris: eaſt longitude 2° 30′, and north latitude 48° 45′.

CHARGE, in gunnery, the quantity of gunpowder and ball, wherewith a gun is loaded for execution.

The rule for charging large pieces, in war, are, that the piece be firſt cleaned or ſcoured within ſide; that the proper quantity of powder be next driven in, and rammed down: care however being taken, that the powder, in ramming, be not bruiſed, becauſe that weakens its effect; that a little quantity of paper, hay, lint, or the like, be rammed over it; and that the ball or ſhot be intruded.

If the ball be red-hot, a tampion, or trencher of green wood, is to be driven in before it.

The weight of the powder neceſſary for a charge is commonly in a ſubduple proportion to that of the ball. See the articles CANNON, GUN, SHOT, CALIBER, PROJECTILES, &c.

CHARGE, in heraldry, is applied to the figures repreſented on the eſcutcheon, by which the bearers are diſtinguiſhed from one another; and it is to be obſerved, that too many charges are not ſo honourable as fewer.

CHARGE, in the manege, a preparation, or ointment, of the conſiſtence of a thick decoction, applied to the ſhoulder-plaits, inflammations, and ſprains, of horſes: the parts affected are rubbed and chaffed with this compoſition, after which they ſhould be covered with ſinking paper.

This unguent is made up of honey, oil, greaſe, turpentine, and ſometimes lees of wine, and other matters.

Charges are outward applications to the bodies of horſes, &c. and are prepared divers ways, according to the nature of the diſeaſe.

CHARGE, or OVERCHARGE, in painting, an exaggerated repreſentation of any perſon, wherein the likeneſs is preſerved, but withal ridiculed. Few painters have the genius to ſucceed in theſe charges: the method is, to pick out and heighten ſomething amiſs in the face, whether by way of defect or redundancy; thus, if nature has given a man a noſe a little larger than ordinary, the painter falls in with her, and makes the noſe extravagantly long; and ſo in other places.

CHARGE *of lead* denotes a quantity of thirty ſix pigs. See the article PIG.

CHARGED, in heraldry. A ſhield carrying ſome impreſs or figure, is ſaid to be charged therewith; ſo alſo when one bearing, or charge, has another figure added upon it, it is properly ſaid to be charged.

CHARGED CYLINDER, in the art of war, is

is that part of the chace of the gun where the powder and ball are contained.

CHARIENTISM, χαριεντισμὸς, in rhetoric, a figure wherein a taunting expreſſion is ſoftened by a jeſt.

CHARIOT, a half coach, having only a ſeat behind, with a ſtool, at moſt, before. See the articles COACH and CALASH.

The chariots of the antients, chiefly uſed in war, were called by the ſeveral names *bigæ*, *trigæ*, &c. according to the number of horſes applied to draw them. By this ſort of martial machine may be underſtood either cart, coach, chariot, chaiſe, or any other vehicle moving on wheels: theſe were not only contrived for ſervice, but ornament, being richly embоſſed with gold and other metals, and likewiſe adorned with curious hangings. Every chariot carried two men, who were probably the warrior and the charioteer; and we read of ſeveral men of note and valour employed in driving the chariot. When the warriors came to encounter in cloſe fight, they alighted out of the chariot, and fought on foot; but when they were weary, which often happened, by reaſon of their armour, they retired into their chariot, and thence annoyed their enemies with darts and miſſive weapons. Theſe chariots were made ſo ſtrong, that they laſted for ſeveral generations.

Beſides this ſort, we find frequent mention of the *currus falcati*, or thoſe chariots armed with hooks, or ſcythes, with which whole ranks of ſoldiers were cut off together, if they had not the art of avoiding the danger; theſe were not only uſed by the Perſians, Syrians, Egyptians, &c. but we find them among our britiſh anceſtors. The deſcriptions which the antients give us of theſe chariots, is much after the following manner: the beam to which the horſes were faſtened, was armed with pikes, having iron points to them, which projected forwards; the yokes of the horſes had likewiſe two long points of three cubits; to the axle tree were alſo fixed bowſprits, armed at the extremities with ſcythes, which tore every thing they met with to pieces: the driver's ſeat was a kind of little tower, made of very ſolid wood, raiſed breaſt high; the charioteer was armed all over, and covered with iron. Theſe chariots were ſometimes ſo large as to hold ſeveral men, well armed, who fought with darts and arrows.

Triumphal CHARIOT was one of the principal ornaments of the roman celebration of a victory. See the article TRIUMPH.

The roman triumphal chariot was generally made of ivory, round like a tower, or rather of a cylindrical figure; it was ſometimes gilt at the top, and ornamented with crowns; and, to repreſent a victory more naturally, they uſed to ſtain it with blood. It was uſually drawn by four white horſes, but oftentimes by lions, elephants, tygers, bears, leopards, dogs, &c.

Sailing CHARIOT. Maurice of Naſſau, prince of Orange, who made a conſiderable figure in Holland againſt the Spaniards, had a chariot, which, inſtead of horſes, was driven by the wind.

CHARISIA, in heathen antiquity, a nocturnal feſtival, kept in honour of the graces, and conſiſting chiefly of dancing; only that ſweet-meats, called likewiſe chariſia, were diſtributed among thoſe preſent.

CHARISTIA, a feſtival of the antient Romans, celebrated in the month of February, wherein the relations by blood and marriage met, in order to preſerve a good correſpondence; and that, if there happened to be any difference among them, it might be the more eaſily accommodated, by the good humour and mirth of the entertainment.

CHARISTICARY, among the Greeks, a kind of donatary, or commendatary, who enjoyed the revenue of an hoſpital, or monaſtery, without being accountable to any perſon. See COMMENDAM and ABBOT.

CHARITATIVE *aid or ſubſidy*, in the canon law, a moderate allowance which a council grants a biſhop, upon any urgent occaſion, as when his revenues will not bear his expences to a council, &c.

CHARITY, among divines, one of the three grand theological virtues, conſiſting in the love of God and of our neighbour, or the habit and diſpoſition of loving God with all our heart, and our neighbour as ourſelves.

CHARITY, among moraliſts, is uſed for the effect of a moral virtue, and conſiſts in ſupplying the neceſſities of others, whether with money, counſel, aſſiſtance, or the like.

CHARITY *of our lady*, in church-hiſtory, a religious order in France, which, though charity was the principal motive of their union, grew, in length of time, ſo diſorderly and irregular, that their order dwindled, and at laſt became extinct.

There is ſtill at Paris a religious order of women, called nuns hoſpitallers of the charity

charity of our lady. The religious of this hoſpital were by vow obliged to adminiſter to the neceſſities of the poor and the ſick, but thoſe only women.

CHARITY *of St. Hippolitus*, a religious congregation founded, about the end of the XVIth century, by one Bernardin Alvarez, a Mexican, in honour of St. Hippolitus the martyr, patron of the city of Mexico; and approved by pope Gregory XIII.

CHARITY-SCHOOLS, are ſchools erected and maintained by various pariſhes, by the voluntary contributions of the inhabitants, for teaching poor children to read, write, and other neceſſary parts of education. In moſt charity-ſchools the children are likewiſe cloathed and put out to trades, ſervices, *&c.* on the ſame charitable foundation.

The charity-ſchools which have been erected of late years in London, are the greateſt inſtance of public ſpirit the age has produced; but indeed when we conſider how long this ſort of beneficence has been on foot, we muſt acknowledge it is rather from the good management of thoſe inſtitutions, than from the number and value of the benefactions to them, that they make ſo great a figure: one would almoſt think it impoſſible that in the year 1711, being fourteen years from the firſt inſtitution, there ſhould not have been five thouſand pounds, beſtowed in gifts this way, nor ſixteen hundred children, including males and females, put out to methods of induſtry.

Of late, indeed, theſe charities have increaſed, and there are now few pariſhes in and about London, without their charity-ſchools; beſides the vaſt number of them ſpread throughout the moſt conſiderable towns of England and Wales, and the numerous inſtitutions of that kind all over Scotland.

CHARKING, or CHARRING, the making of charcoal. See CHARCOAL.

CHARLATAN, or CHARLETAN, an empiric, or quack, who retails his medicines on a public ſtage, and draws the people about him with his buffooneries, feats of activity, *&c.* See the article EMPIRIC.

CHARLEMONT, a town of the province of Namur, in the auſtrian Netherlands, about eighteen miles ſouth of Namur: eaſt longitude 4° 40′, and north latitude 50° 10′.

CHARLEMONT is alſo the name of a town of Ireland, ſituated on the river Blackwater, in the county of Armagh, and province of Ulſter, about ſix miles ſouth-eaſt of Dungannon; weſt longit. 6° 50′, and north lat. 50° 16′.

CHARLEROY, a ſtrong town in the province of Namur, in the auſtrian Netherlands, ſituated on the river Sambre, about nineteen miles weſt of Namur: eaſt longitude 4° 20′, and north latitude 50° 30′.

CHARLES's-CAPE, a promontory of Virginia, in north America, forming the northern head-land of the ſtreight that enters the bay of Cheaſepeak.

CHARLES's-CAPE is alſo the name of a head-land on the ſouth-weſt part of the ſtreight entering into Hudſon's bay.

CHARLES's-FORT, a fortreſs in the county of Cork, and province of Munſter, in Ireland, ſituated at the mouth of Kinſale-harbour; weſt longitude 8° 20′, and north latitude 51° 21′.

CHARLES's-TOWN, the capital of South Carolina, in North America, ſituated on a peninſula formed by Aſhley and Cooper rivers, the former of which is navigable for ſhips twenty miles above the town: weſt. long. 79°, and north lat. 32° 30′.

CHARLES's-WAIN, in aſtronomy, ſeven ſtars in the conſtellation called urſa major, or the great bear. See the article URSA.

CHARLETON, an iſland at the bottom of Hudſon's-bay, in North America, ſubject to Great Britain: weſt longitude 80°, and north latitude 52° 30′.

CHARLEVILLE, a town of Ireland, in the county of Cork, and province of Ulſter, about thirty miles north of Cork; weſt long. 8° 38′, and north lat. 52° 15′.

CHARLEVILLE is alſo a town of Champaign, in France, about thirty-five miles north-weſt of Rheims; eaſt long. 4° 35′, and north lat. 49° 45′.

CHARLOCK, the engliſh name of a plant called by botaniſts rapiſtrum, or crambe. See the article CRAMBE.

Charlock is a very troubleſome weed in corn-fields, where we find two ſpecies of it very common, *viz.* one with a yellow flower, and the other with a white one. To prevent its growth, the farmers mix horſe-dung with their cow-dung uſed in manure, as the laſt is very apt to breed the charlock. When a field of barley is much infeſted with it, they mow it down in May, when in flower, taking care only to cut it ſo low as juſt to take off the tops of the leaves of the barley.

CHARM, a term derived from the latin *carmen*, a verſe, and uſed to denote a magic

magic power, or ſpell, by which, with the aſſiſtance of the devil, ſorcerers and witches were ſuppoſed to do wonderful things, far ſurpaſſing the power of nature. Theſe things are now ſufficiently exploded. See the articles MAGIC, CARMEN, AMULET, &c.

CHARNEL, or CHARNEL-HOUSE, a kind of portico, or gallery, uſually in or near a church-yard, over which were antiently laid the bones of the dead, after the fleſh was wholly conſumed.

Charnel-houſes are now uſually adjoining to the church.

CHAROLLES, a town of Burgundy, in France, about thirty-ſeven miles ſouth-weſt of Challons on the Soan; eaſt longitude 4° 6′, and north lat. 46° 25′.

CHARRE, or GILT CHARRE, a truttaceous fiſh, called by many carpio, and reckoned by Artedi a ſpecies of ſalmon, leſs than a foot in length, with five rows of teeth in its palate.

Red CHARRE, is likewiſe a ſpecies of ſalmon, called by authors umbla minor: it is much of the ſame ſize with the former, with the belly-fin red, and the under jaw a little longer than the upper one.

CHARRING. See CHARKING.

CHART, or SEA-CHART, an hydrographical map, or a projection of ſome parts of the earth's ſuperficies in plano, for the uſe of navigators.

Charts differ very conſiderably from geographical or land maps, which are of no uſe in navigation. Nor are ſea-charts all of the ſame kind, ſome being what we call plain-charts, others mercator-charts, and others globular-charts.

Plain CHARTS is a repreſentation of ſome part of the ſuperficies of the terraqueous globe, in which the meridians are ſuppoſed parallel to each other, the parallels of latitude at equal diſtances, and conſequently the degrees of latitude and longitude every where equal to each other.

To conſtruct a plain CHART, that ſhall contain from five degrees north, to five degrees ſouth latitude; and from ſix degrees eaſt, to ſix degrees weſt longitude; draw the meridian A B (plate XL. fig. 5.) and divide it into as many equal parts as there are degrees of latitude, which in this caſe are ten: at right angles to the meridian A B, draw the lines A D and B C, which will repreſent the parallels of five degrees north and five ſouth latitude; and ſet off in each the number of degrees it muſt contain, in this caſe twelve, of the ſame length with the degrees of latitude.

Through the ſeveral diviſions of the right lines A D and B C draw right lines, which will repreſent ſo many meridians in the chart. Through the ſeveral diviſions of the line A B, draw right lines parallel to A D, or B C, which will repreſent ſo many parallels of latitude.

If you divide each of the right angles A, B, C, D, into eight equal parts, and draw lines from the angular points through the ſeveral diviſions of the arches, they will repreſent the rumb-lines upon the chart, which are of uſe in finding the bearing of places from each other: but to avoid the confuſion which attends a multiplicity of lines, the rumb lines from but one angle are delineated.

For the uſe of this chart, ſee the article NAVIGATION.

Mercator's CHART, is that where the meridians are ſtraight lines parallel to each other, and equidiſtant; the parallels are alſo ſtraight lines, and parallel to each other: but the diſtance between them increaſes from the equinoctial towards either pole, in the ratio of the ſecant of the latitude to the radius.

If the ſuperficies of the terreſtrial globe be ſuppoſed to be taken off, and extended on a plane, ſo as to make the meridians parallel to each other, and the degrees of longitude every where equal, it is eaſy to conceive that it muſt be productive of moſt notorious errors; for an iſland in latitude 60°, where the radius of the parallel is only equal to one half of the radius of the equator, will have its length from eaſt to weſt diſtorted in a double ratio to what it was on the globe; that is, its length from eaſt to weſt, in compariſon of its breadth from north to ſouth, will be repreſented in a double proportion to what it really is: whence it follows, that in whatever proportion the degrees of any parallel are increaſed or diminiſhed, by a projection in plano, the degrees of longitude ought to be increaſed or diminiſhed in the ſame ratio; for otherwiſe the true bearings and diſtances of places will be loſt, as in the caſe of the plain-chart, where the degrees of latitude and longitude are all equal.

Though this projection is generally called Mercator's projection, yet our countryman, Mr. Wright, had long before invented it, demonſtrated its uſe, and ſhewn a ready way of conſtructing it, by inlarging


BRITISH
MUSEUM

Fig. 1. CEPPHUS.



Fig. 2.
CERVUS VOLANS.



Fig. 4.
CHAMOIS-GOAT.



Fig. 3. CHAIN.

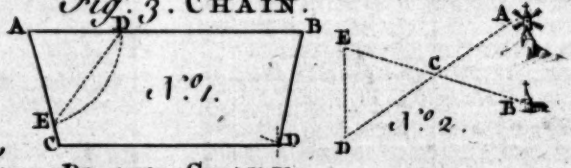
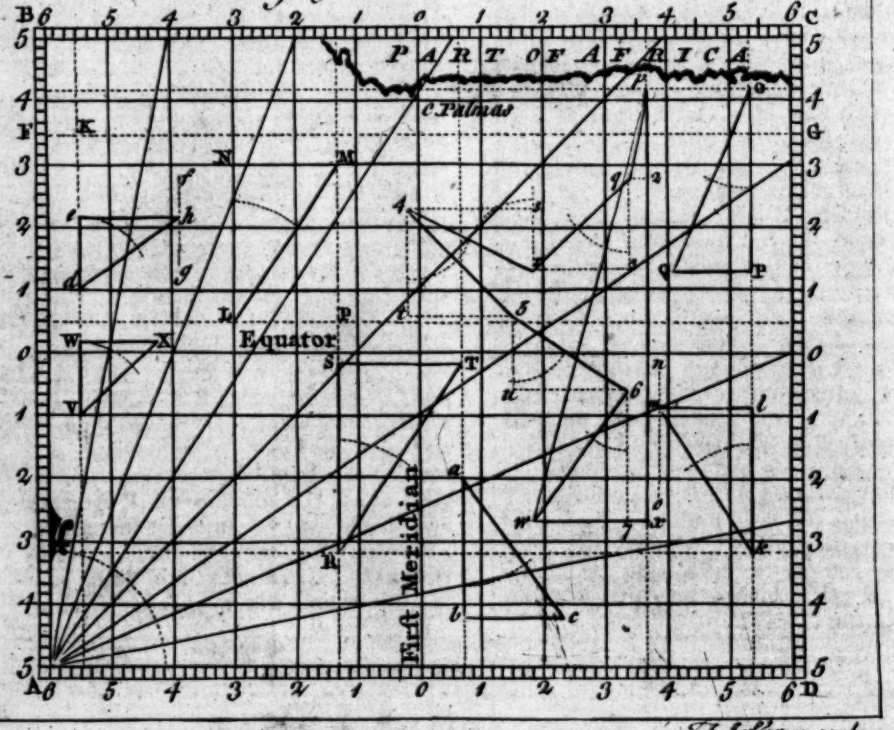


Fig. 5. PLAIN CHART



T. Jefferys sculp.

inlarging the meridian line, by a continued addition of ſecants: but neither of theſe gentlemen is thought the original author of it, as being hinted by Ptolemy about two thouſand years ago.

The manner of conſtructing this projection. Let AB (plate XLI. fig. 1.) be an arch of the equator, intercepted between any two meridians as AP, BP, meeting in P, the pole of the ſphere, whoſe center is C. Upon the points A and B, erect the perpendiculars AH and BI, and let DE repreſent an arch of any parallel contained between the ſame meridians. Draw CA and CB, KD and KE, perpendicular to PC; through D and E draw CF, CG, and join FG; laſtly, let fall the perpendicular DL.

Now the arch of the equator AB is to the ſimilar arch of the parallel DE, as AC is to DK, or as the radius to the co-ſine of the latitude AD. Suppoſe now the meridians AP, BP, to be in part projected into the perpendiculars AH and BI, then will the arch DE be projected into the arch FG=AB; but in this caſe DE, the natural length of the arch, is to FG its protracted length, as the radius CD to the ſecant of the latitude CF, or as the co-ſine LC to the radius CD; for as CF: AC=CD:: DC: LC. Hence it follows that the degrees of latitude in Mercator's chart, increaſe in proportion of the ſecant of the latitude to the radius.

For the conſtruction and uſes of Mercator's chart, ſee *Mercator's* SAILING.

Globular CHART, a meridional projection, wherein the diſtance of the eye from the plane of the meridian, upon which the projection is made, is ſuppoſed to be equal to the ſine of the angle of 45°. This projection comes the neareſt of all to the nature of the globe, becauſe the meridians therein are placed at equal diſtances; the parallels alſo are nearly equidiſtant, and conſequently the ſeveral parts of the earth have their proper proportion of magnitude, diſtance and ſituation, nearly the ſame as on the globe itſelf.

Chorographic CHARTS, deſcriptions of particular countries. See CHOROGRAPHY.

Heliographic CHARTS, deſcriptions of the body of the ſun, and of the maculæ or ſpots obſerved in it. See the articles FACULÆ, MACULÆ, *and* SUN.

Hydrographic CHARTS, ſheets of large paper, whereon ſeveral parts of the land and ſea are deſcribed, with their reſpective coaſts, harbours, ſounds, flats, rocks, ſhelves, ſands, &c. together with the longitude and latitude of each place, and the points of the compaſs. See the article CHART, *or* SEA CHART, *ſupra.*

Selenographic CHARTS, particular deſcriptions of the ſpots, appearances, and maculæ of the moon. See the article *Heliographic* CHARTS, *ſupra.*

Topographic CHARTS, draughts of ſome ſmall parts of the earth only, or of ſome particular places, without regard to its relative ſituation, as London, York, &c.

CHARTA EMPORETICA, in pharmacy, &c. a kind of paper made very ſoft and porous, uſed to filter withal.

CHARTA, in antient cuſtoms, is not only uſed for a charter, but alſo for a ſtatute. See CHARTER *and* STATUTE.

CHARTA-MAGNA, an antient inſtrument, containing ſeveral privileges and liberties granted to the church and ſtate by Edward the confeſſor, together with others relating to the feudal laws of William the conqueror, granted by Henry I. all confirmed by the ſucceeding princes. See the article MAGNA-CHARTA.

CHARTA PARDONATIONIS SE DEFENDENDO, is the form of a pardon for a man's ſlaying another in his own defence.

CHARTA PARDONATIONIS UTLAGARIÆ, the form of a pardon for a man that is out-lawed.

CHARTA SIMPLEX, is a ſingle deed, or deed-pole. See the article DEED.

CHARTER, in law, a written inſtrument or evidence of things acted between one perſon and another.

Charters of private perſons, are deeds and inſtruments for the conveyance of lands, &c. Here the purchaſer of land ſhall have all the charters and deeds, as incident to the ſame, and for the maintenance of his title. But this is underſtood where the feoffer is not bound to a general warranty of the land.

Great CHARTER, MAGNA-CHARTA. See the article MAGNA-CHARTA.

CHARTER *of the king*, is where the king makes a grant to any perſon or body politic, as a charter of exemption, of privilege, pardon, &c.

CHARTER *of the foreſt*, that wherein the laws of the foreſt are compriſed and eſtabliſhed. See the article FOREST.

CHARTER-HOUSE. See CHARTREUSE.

CHARTER-LAND, ſuch land as a perſon holds by charter, that is, by evidence in writing, otherwiſe termed free-hold. See the article FREE-HOLD.

CHARTER-PARTY, in commerce, a deed or writing indented, that is, made between merchants and ſeafaring men, concerning their merchandize and maritime affairs.

A charter-party of affreightment, ſettles the agreement in relation to the freight of a ſhip and cargo, between the merchant and commander or maſter of the veſſel. It binds the maſter to deliver the cargo in good condition at the place of diſcharge, &c.

In thoſe charter-parties, if the dangers of the ſea are excepted, it has been adjudged that ſuch exception extends as well to any danger upon the ſea from pirates or men of war, as to common dangers by ſhipwreck, tempeſts, &c.

The charter-party differs from a bill of loading, in that the firſt is for the intire freight or lading, and that for both going and returning: whereas the latter is only for a part of the freight, or at moſt only for the voyage one way.

The common law always conſtrues charter-parties, as near as may be, according to the intention and deſign of them, and not according to the literal ſenſe. And, if the maſter of a ſhip enters into a charter-party for himſelf and owners, the maſter in that caſe may releaſe the freighters, without adviſing with the owners: though if the owners let out to freight ſuch a ſhip, whereof A. B. is maſter, and he only covenants at the bottom, and ſubſcribes his name, here his releaſe will not bind or affect the owners of the ſhip; but their releaſe, on the other hand ſhall bind and include him. See FREIGHT.

CHARTIS REDDENDIS, in law, a writ that lies againſt a perſon, who having charters of feoffment delivered to him to keep, afterwards refuſes to deliver them.

CHARTOPHYLAX, the name of an officer of the church of Conſtantinople, who attends at the door of the rails when the ſacrament is adminiſtered, and gives notice to the prieſts to come to the holy table. He repreſents the patriarch upon the bench, tries all eccleſiaſtical cauſes, keeps all the marriage regiſters, aſſiſts at the conſecration of biſhops, and preſents the biſhop elect at the ſolemnity, and likewiſe all other ſubordinate clergy.

CHARTRES, a large city of France, in the province of Orleanois, ſituated on the river Eure, about forty-two miles ſouth-weſt of Paris; eaſt long. 1° 32′, north lat. 48° 27′.

It is a biſhop's ſee.

CHARTREUSE, or CHARTREUSE GRAND, a celebrated monaſtery, the capital of all the convents of the carthuſian monks, ſituated on a ſteep rock in the middle of a large foreſt of fir-trees, about ſeven miles north-eaſt of Grenoble, in the province of Dauphine, in France; eaſt long. 5° 50′, north lat. 45° 20′. See the article CARTHUSIANS.

From this mother convent, all the others of the ſame order take their name; among which was the chartreuſe of London, corruptly called the charter-houſe, now converted into an hoſpital, called from its founder Sutton's hoſpital, and endowed with a revenue of 6000 l. *per ann.*

Here are maintained eighty decayed gentlemen, not under fifty years of age: alſo forty-four boys are maintained, educated, and fitted either for the univerſity or trades. Thoſe ſent to the univerſity, have an exhibition of 20 l. a year each for eight years; the reſt are put to trades: the governors of this hoſpital are ſixteen in number, all perſons of the firſt diſtinction, and take their turns in the nomination of penſioners and ſcholars.

CHARTULARY, *chartularius*, an officer in the latin church, anſwering to the chartophylax of the Greeks. See the article CHARTOPHYLAX.

CHARYBDIS, a rock in the ſtrait of Meſſina, between Italy and Sicily, much celebrated in the writings of antient poets.

CHARYBDIS is alſo an appellation given by Dr. Plot to certain openings in the bottom of the ſea, whereby the water is conveyed to the origin or ſources of ſprings, rivers, &c.

The fluxus moſchonicus, or maalſtrome on the coaſt of Norway, is ſuppoſed to be owing to ſome ſuch ſubterranean indraught; and it is advanced alſo, that the Mediterranean ſea could not be emptied of the vaſt quantities of waters it receives, but muſt overflow the land of Egypt, unleſs ſwallowed by ſome ſuch charybdis, which is either in ſome part of the baſon of that ſea, or near the mouth of it; in which caſe, it may be the occaſion of that ſtrong under-current, deſcribed by all thoſe who have treated of this ſea. An immenſe charybdis, placed near the Strait's mouth, may be hid under the immenſity of waters there; but as it would abſorb the deep waters continually, and that in large quantities, it would neceſſarily cauſe ſuch an under-current there.

CHASE, a great quantity of ground lying open

open and privileged for wild beaſts and wild fowl. Such is Endfield-chaſe.

A chaſe differs from a foreſt, inaſmuch as it may be in the hands of a ſubject, which a foreſt in its proper nature cannot; and from a park, in that it is not incloſed, and hath more officers. A chaſe is not endowed like a foreſt with ſo many liberties, as the courts of attachment, ſwainmote, and juſtice ſeat; and cannot lawfully be made, without licenſe from the king under the broad ſeal.

CHASE in the ſea-language, ſignifies the ſhip chaſed or purſued. See CHASING.

To give CHASE, is to purſue a ſhip at ſea.

Stern CHASE, is when the chaſe is right a-head with the chaſer.

To lie with a ſhip's fore-foot in the CHASE, is to ſail the neareſt way to meet her, and ſo to croſs her in her way, or to come acroſs her fore-foot.

A ſhip is ſaid to have a good forward or ſtern-chaſe, when ſhe is built forward on, or a-ſtern, that ſhe can carry many guns, to ſhoot right forwards or backwards.

CHASE *of a gun*, is the whole bore of a piece of cannon.

CHASE-GUNS, thoſe guns the ports of which are either in the head or in the ſtern. The former are uſeful in chaſing others: the latter, when a ſhip is chaſed or purſued by another ſhip.

CHASING, in the ſea-language, is the giving chaſe. See the article CHASE.

In chaſing, theſe rules are to be obſerved. If the chaſe be to the windward, the chaſer is to bring all his tacks aboard, and to ſhape his courſe to meet her at the neareſt angle. If the chaſe be to the leeward, then the chaſer may come in with her, unleſs ſhe bear right before the wind, and ſo outſail her; or bring her cloſe by a wind, and the chaſer prove the more leeward ſhip. If the chaſe be found right a-head, and ſo the chaſer be put to a ſtern-chaſe, then the beſt ſailer will carry it, if there be ſea-room and day-light.

Being come up cloſe with the chaſe, endeavour to croſs her fore-foot, by which means you will both hinder her way, avoid the fury of her ordnance, and ſcower her decks from ſtem to ſtern, as you paſs thwart her hawſe. And if ſhe makes away from you, ply your guns with caſe-ſhot, or croſs bar-ſhot, at her ſails, yards, maſts, and general tackling.

CHASING *of gold, ſilver*, &c. See the article ENCHASING.

CHASM, χασμος, or χασμα, properly ſignifies a large gap or hiatus; and hence has been uſed for oſcitation or yawning.

CHASTE-TREE, the engliſh name of the vitex. See the article VITEX.

CHASTISEMENT, in the manege, the ſevere and rigorous effect of the aids; for when the aids are given with ſeverity, they become puniſhments. See AIDS.

CHATELET, the name of certain courts of juſtice eſtabliſhed in ſeveral cities in France. The grand chatelet at Paris, is the place where the preſidial or ordinary court of juſtice of the provoſt of Paris is kept; conſiſting of a preſidial, a civil chamber, a criminal chamber, and a chamber of policy. The little chatelet is an old fort, now ſerving as a priſon.

CHATHAM, a port-town of Kent, adjoining to Rocheſter, ſituated on the river Medway, thirty miles ſouth-eaſt of London; eaſt long. 40°, north lat 51° 20′.

It is one of the principal ſtations of the royal navy, and is furniſhed with timber, rope-yards, and all manner of naval ſtores, ſufficient for the building and fitting out the largeſt fleet.

CHATTEAU-CAMBRESIS, a town of the Cambreſis, in the french Netherlands, ſituated on the river Selle, thirteen miles ſouth-eaſt of Cambray; eaſt long. 3° 25′, north lat. 50° 6′.

CHATTEAU-DAUPHINE, a fortreſs ſituated on the frontiers of Piedmont, in the province of Dauphine, but yielded to the king of Sardinia; eaſt long. 6° 40′, north lat. 44° 30′.

CHATTEAU-DUN, a town of France, twenty-five miles north weſt of Orleans; eaſt long. 1° 25′, north lat. 48° 5′.

CHATTEAU-ROUX, a town of Berri, in France, ſituated upon the Indre, about fifteen leagues from Bourges.

CHATEL-CHALONS, a town of France, in the province of Frenche Compte, about twenty miles ſouth of Dole; eaſt long. 5° 35′, north lat. 46° 50′.

CHATTELERAUT, a town of France, in the province of Orleanois, about eighteen miles north-eaſt of Poictiers; eaſt long. 35′, north lat. 46° 45′.

CHATTELET, a town of the Low Countries, in the province of Namur, ſituated on the river Sambre, four miles eaſt of Charleroy; eaſt long. 4° 30′, north lat. 50° 25′.

CHATTELS, in law, all ſorts of goods moveable and immoveable, except ſuch as are in the nature of freehold.

Chattels are reckoned either perſonal, or real.

The former are such as do belong either immediately to the person of a man, as his horse, sword, &c. or such things as being injuriously held from him, a man hath no way to recover but by a personal action. See the article PERSONAL.

The latter are such as do not immediately belong to the person of a man, but to some other thing, by way of independance, as a box with charters of land, apples upon a tree, &c. or such things as necessarily issue out of some immoveable thing to a person, as a lease or rent for years; also a hold at will.

CHATTER, or STONE CHATTER. See the article STONE.

CHATTIGAN, a port-town of India, in the province of Bengal, situated at the mouth of the most easterly branch of the Ganges, subject to the mogul: east long. 91°, north lat. 23°.

CHATTILLON, a town of Burgundy, in France, about sixteen miles south-west of Geneva; east long. 5° 40′, north lat. 46° 16′.

This is likewise the name of several other towns of France, situated upon the Indre, the Loing, the Loire, the Marne, the Saone, &c.

CHAVARIGHTS, a sect of mahometans, who deny that God ever sent a prophet that was infallible, and who had a commission to give a law to mankind: they pretend likewise, that if such an office should ever become necessary, it would not be confined to a single family, but that every man of probity and virtue would be capable of that honour.

CHAUFE-WAX. See CHAFE-WAX.

CHAUMONT, the name of two towns of France: the one situated in the isle of France, thirty miles north-west of Paris: east longitude 2°, north latitude 49° 18′: the other situated on the river Marne, in the province of Champaign; east long. 5° 15′, north lat. 48° 12′.

CHAUNTER, CHAUNTOR, or CHANTOR. See the article CHANTOR.

CHAUNTRY, or CHANTRY. See the article CHANTRY.

CHAUSE-TRAPE, or CHAUSSE-TRAPE, the same with caltrop. See CALTROP.

CHAZINZARIANS, in church-history, a sect of heretics who adored the cross. *Chazus* signifies the cross, in the armenian language: they arose in Armenia, in the seventh century.

CHEADLE, a market-town of Staffordshire, ten miles north-east of Stafford: west long. 2°, north lat. 53°.

CHEASPEAK-BAY, a large frith or arm of the sea, which runs up about three hundred miles into the country between Virginia and Maryland, in North America: it is navigable almost all the way for large ships; being about twenty miles broad at the entrance between Charles-cape and cape Henry, and between twenty and thirty miles broad afterwards. See the article CHARLES-CAPE.

CHECAYA, in turkish affairs, the second officer of the janizaries, who commands them under the aga, and is otherwise called protogero.

There is also a checaya of the treasury, stables, kitchen, &c. the word signifying as much as lieutenant, or the second in any office.

CHECK, or CHECK-ROLL, a roll or book, wherein is contained the names of such persons as are attendants and in pay to the king, or other great personages, as their household servants.

Clerk of the CHECK, in the king's household, has the check and controulment of the yeomen of the guard, and all the ushers belonging to the royal family, allowing their absence or defects in attendance, or diminishing their wages for the same, &c. He also, by himself or deputy, takes the view of those that are to watch in the court, and has the setting of the watch, &c.

Clerk of the CHECK, in the king's navy at Plymouth, &c. is also the name of an officer invested with the like power.

CHECK, in falconry, a term used of a hawk when she forsakes her proper game, to fly at pyes, crows, rooks, or the like, that cross her in her flight.

CHECKY, in heraldry, is when the shield, or a part thereof, as a bordure, &c. is chequered, or divided into chequers or squares, in the manner of a chess-board. See plate XLI. fig. 2.

This is one of the most noble and most antient figures used in armory; and a certain author saith, that it ought to be given to none but great warriors, in token of their bravery: for the chess-board represents a field of battle, and the pawns of men, placed on both sides, represent the soldiers of the two armies, which move, attack, advance, or retire, according to the will of the two gamesters, who are the generals.

This figure is always composed of metal and colour: but some authors would have it reckoned among the several sorts of furs.

CHEEK, in anatomy, that part of the face

face ſituated below the eyes, on each ſide. Wounds of the cheeks, if ſmall, may be cured by the dry ſuture; but if large, the bloody one muſt be uſed. See the article SUTURE.

CHEEKS, among mechanics, are almoſt all thoſe pieces of their machines and inſtruments, that are double, and perfectly alike; as the cheeks of a mortar, which are made of ſtrong wooden planks, of a ſemicircular form, bound with thick plates of iron, and fixed to the bed with four bolts: theſe cheeks riſe on each ſide the mortar, and ſerve to keep it at what elevation is given it: the cheeks of a printing-preſs are its two principal pieces, placed perpendicular and parallel to each other, and ſerving to ſuſtain the three ſommers, &c.

CHEEKS, in ſhip-building, two pieces of timber, fitted on each ſide of the maſt, at the top, ſerving to ſtrengthen the maſt there, and having holes in them, called hounds, through which the ties run to hoiſt the yards.

Alſo the uppermoſt rail, or piece of timber in the beak of a ſhip, and thoſe on each ſide of the trail-board, are called the upper and lower cheek.

The knees alſo which faſten the beak-head to the bows of a ſhip, are called cheeks.

CHEESE, *caſeus*, a ſort of food, prepared of curdled milk, purged from the ſerum or whey, and afterwards dried for uſe.

Phyſicians condemn the too free uſe of cheeſe, by reaſon it loads the ſtomach when new, and heats and inflames when old.

Every country has its places noted for this commodity: thus Cheſter and Glouceſter-cheeſes are famous in England; and the Parmeſan cheeſe is in no leſs repute abroad, eſpecially in France. This ſort of cheeſe is entirely made of ſweet cow's milk: but at Rochfort, in Languedoc, they make cheeſe of ewe's milk; and in other places, it is uſual to add goat or ewe's milk, in a certain proportion, to that of cow's.

There is likewiſe a kind of medicated cheeſe, made by intimately mixing the expreſſed juice of certain herbs, as ſage, baum, mint, &c. with the curd, before it is faſhioned into a cheeſe. The 100 weight of cheeſe pays on importation 1 s. 3 $\frac{4}{10}$ d. and draws back, on exportation, 1 s. 1 $\frac{1}{2}$ d. at the rate of 6 s. 8 d. The cheeſe of Ireland is prohibited to be imported.

CHEESE-RUNNET, in botany, the ſame with the gallium of authors. See the article GALLIUM.

CHEGFORD, a market-town of Devonſhire, about thirteen miles weſt of Exeter; weſt longitude 4°, north latitude 50° 40′.

CHEIRANTHUS, in botany, a genus of the tetradynamia ſiliquoſa claſs of plants, called alſo leucoium, and in engliſh, wall-flower, or ſtock-july flower.

The flower conſiſts of four roundiſh and cruciform petals: the fruit is a long, compreſſed, bilocular pod, containing a great number of pendulous, oval, and compreſſed ſeeds.

The flowers of this plant are ſaid to be cordial, anodyne, aperient, and emmenagogue.

CHEKAO, a kind of paſte, prepared by calcination and trituration from a hard ſtony-ſubſtance, and afterwards waſhing the powder in large quantities of fair water.

The Chineſe uſe the chekao in drawing the elegant figures we ſee in the wholly white china-ware, which they afterwards varniſh in the common way.

CHEKIAM, a province of China, bounded by that of Nankin on the north, and by the ocean on the eaſt.

CHELAZIUM, a name uſed by ſome for a diſtemper of the eye, commonly called a ſtithe or ſtye.

CHELIDONIA, in grecian antiquity, a feſtival celebrated at Rhodes, in the month of Boedromion, in which the boys went from door to door begging and ſinging a ſong called χελιδονισμα, becauſe it began with an invocation of the χελιδων, or ſwallow.

CHELIDONIUM, CELANDINE, or the yellow horned poppy, in botany, a genus of the polyandria-monogynia claſs of plants: the corolla conſiſts of four roundiſh, plane, patent petals, large and narrow at the baſe: the fruit is a cylindric pod, formed of two valves, and containing only one cell: the ſeeds are numerous, oval and ſmooth: the receptacle is linear, between the valves, in form of a ſuture, and not opening.

This plant abounds with a ſharp, acrid ſalt, which makes it deterſive, and is therefore, recommended in the jaundice particularly, and in all other obſtructions and diſorders of the viſcera. The juice is alſo eſteemed for taking films, clouds and ſpecks off the eyes.

CHELEDONIUS LAPIS, in natural-hiſto-

ry, a ſtone ſaid by the antients to be found in the ſtomachs of young ſwallows, and greatly cried up for its virtues in the falling ſickneſs; but from their deſcription, it appears to be only a ſpecies of lycodontes, or bufonitæ. See the articles LYCODONTES and BUFONITÆ.

CHELM, a town of Poland, capital of a palatinate of the ſame name: it is ſituated in the province of red Ruſſia, 110 miles ſouth-eaſt of Warſaw; eaſt long. 23° 30′, north lat. 51° 25′.

CHELMSFORD, the county-town of Eſſex, ſituated on the river Chelmer, twenty-five miles north-eaſt of London; eaſt long. 30′, north lat. 51° 40′.

It ſends two members to parliament.

CHELON, in ichthyology, a fiſh of the mullet-kind, extremely like the common mullet. See the article MUGIL.

CHELONE, in botany, a genus of the didynamia-angioſpermia claſs of plants: the corolla conſiſts of only one petal; the tube is cylindric and very ſhort; the mouth is inflated, oblong, convex above, and plane below; the upper lip is obtuſe and emarginated; the lower is almoſt equal with the higher, and is divided into three ſmall ſegments. The fruit is a roundiſh capſule, containing only one cell, and longer than the cup: the ſeeds are numerous, roundiſh, and covered with a membranaceous margin.

CHELSEA, a fine village ſituated on the northern bank of the river Thames, a mile weſtward of Weſtminſter, remarkable for a magnificent hoſpital of invalids and old decrepit ſoldiers; and a pleaſure houſe, called Ranelagh, to which a great deal of fine company reſort in ſummer.

CHELTENHAM, or CHILTENHAM, a market-town of Glouceſterſhire, ſeven miles north-eaſt of Glouceſter: weſt long. 2° 10′, north lat. 51° 50′.

It is chiefly remarkable for its mineral waters, of the ſame kind with thoſe of Scarborough. See SCARBOROUGH.

CHELYS, among the antients, a muſical inſtrument of the pulſative kind, ſaid to be invented by Mercury, and made of a ſhell found in the river Nile, at time of low water.

CHEMA, or CHEME, in antiquity, a meaſure among the antient phyſicians, containing two ſpoonfuls: it was the fifth part of the cyathus or cup: full of oil, it weighed two drachms, and ſeventeen grains.

CHEMIN *des rondes*, in fortification, a ſpace between the rampart and low parapet under it, for the rounds to go about the ſame.

CHEMISE, in fortification, the wall with which a baſtion, or any other bulwark of earth, is lined for its greater ſupport and ſtrength: or it is the ſolidity of the wall from the talus to the ſtone-row.

Fire-CHEMISE, a piece of linen-cloth, ſteeped in a compoſition of oil of petrol, camphor, and other combuſtible matters, uſed at ſea, to ſet fire to an enemy's veſſel.

CHEMISTRY, χημία, an art which teaches the manner of performing certain phyſical operations, whereby bodies, cognizable to the ſenſes, or ſuch as may be rendered ſo, and are capable of being contained in veſſels, may, by ſuitable inſtruments, be ſo changed, that particular determined effects may be thence produced, and the cauſes of theſe effects underſtood, for the ſervice of various arts.

The object whereon chemiſtry is employed to produce changes, extends not only to all ſenſible bodies, but even to inſenſible ones, eſpecially ſuch as may be collected and contained in veſſels; which bodies, by a careful review, have been reduced by the chemiſts to three kingdoms, or claſſes, containing the foſſile, the vegetable, and the animal kingdom.

Dr. Shaw divides chemiſtry in general into philoſophical, technical, commercial, and œconomical.

Philoſophical CHEMISTRY he defines a rational art of dividing, or reſolving, all the bodies within our power, by means of all the inſtruments we can procure, as well into integrant as conſtituent parts; and joining theſe parts together again, ſo as to diſcover the principles, relations, and changes of bodies; make various reſolutions, mixtures, and compoſitions; find out the phyſical cauſe of phyſical effects: and hence improve the ſtate of natural knowledge, and the arts thereon depending. See THEORY.

Philoſophical chemiſtry conſiſts of three parts, *viz.* invention, rationale, and experiment; whence it is otherwiſe defined, a particular exerciſe of the rational and inventive faculties of the mind, leading to experiments, and thence to the diſcovery of cauſes, ſo as to form axioms that ſhall rationally account for phænomena, and diſcover rules of practice for producing uſeful effects: thus philoſophical chemiſtry is not only a key to all the other parts, but of itſelf diſcovers the cauſes of many natural phænomena, as parti-

particularly earthquakes, vulcanos, vegetation, the growth of minerals, &c. See the articles EARTHQUAKE, VULCANO, VEGETATION, &c.

This branch of chemiſtry alſo explains the general forms and qualities of bodies, whereon their properties and effects depend; as volatility and fixedneſs, fluidity and firmneſs, colours, taſtes, odours, effervescences, fermentation, precipitation, congelation, extraction, and the like. See VOLATILITY, FIXEDNESS, COLOUR, TASTE, ODOUR, &c.

From the firſt definition of philoſophical chemiſtry, it follows that the objects of this art are all the bodies within our power, and are therefore taken from the three larger maſſes or regions of the globe, *viz.* the earth, water, and atmoſphere. See the article EARTH, &c.

It alſo follows, that the inſtruments of chemiſtry are all thoſe we can any way procure: there are ſeveral inſtruments continually at work in the three larger maſſes, or kingdoms of the globe, *viz.* the earth, water, and atmoſphere, for the immediate production of effects. We evidently find, that metals and minerals are formed within the earth; vegetables on its ſurface, ſhooting into the air; meteors in the atmoſphere; and men, beaſts, and birds, in the confines of the two: the phyſical cauſe of all which, are to be generally ſought as ſo many rules of practice. The principal phyſical agents in nature appear to be, 1. heat, 2. cold, 3. air, or the integrant parts of the atmoſphere, 4. water, and 5. proper beds or matrices. This is matter of direct obſervation; and might occaſion the eſtabliſhing the four elements, fire, air, water and earth. See the articles HEAT, COLD, AIR, and WATER.

Proper beds or matrices appear to have an inſtrumental agency in the production of natural bodies: every ſubject of an operation, is neceſſarily contained in ſomething that may, 1. afford it a lodgment, 2. make ſome reſiſtance, and 3. convey heat, cold, water, or air to it, or determine their actions upon it. Thus in vegetation, the matrix earth ſupports the ſeed, reſiſts its ſwelling, and conveys a ſtrained or prepared moiſture to it.

The matrices of gems and ores, not only afford a proper lodgment to the ſubject-matter, but alſo reſiſt its growth, by the preſſure of their ſides: which, however, give way a little, and at the ſame time ſtrain and convey ſuitable juices to the ſubject: and ſomething of this kind is obſerved of the fœtus in utero, the hatching of eggs, &c. inſomuch that cloſeneſs, moderate reſiſtance, or a ſlow-yielding of the ſides of the matrix, and a ſtraining of the juices through them (unleſs ſupplied from within) ſeem requiſite for the formation and production of all vegetable, animal and mineral ſubſtances. Whence we are furniſhed with a capital rule for the improvement of chemiſtry, natural philoſophy, and arts; and taught that, in order to imitate nature, chemiſtry muſt not be confined to the ſole uſe of fire, as its inſtrument, but occaſionally employ water, cold, air, earth, and proper matrices or veſſels. See the articles VEGETATION, GENERATION, FOETUS, HATCHING, EXPERIMENTAL PHILOSOPHY, &c.

But beſides the natural inſtruments, there is a great variety of artificial ones belonging to chemiſtry, which ſeems to raiſe the power of this art, in ſome reſpects, above the power of nature: thus by means of particular menſtruums, it performs operations which nature of herſelf does not. For inſtance, of all the metals only iron and copper are found naturally converted into vitriol; whereas chemiſtry makes vitriols even of gold, ſilver, tin, and lead. And hence the productions of art may be much more numerous than the productions of nature, or enlarged at pleaſure, to the great enrichment of arts, and the enlargement of the kingdom of man. In which light the numerous productions of the chemical trades may be conſidered, as by fermentation, diſtillation, dying, ſoap-making, the art of glaſs, metallurgy, &c. See the articles MENSTRUUM, FERMENTATION, DISTILLATION, &c.

Another ſet of inſtruments belonging to chemiſtry, are veſſels, furnaces, and utenſils, of which there is a great variety for various purpoſes, and capable of producing numerous changes in bodies, as by amalgamation, cæmentation, effuſion, fermentation, putrefaction, reduction, &c. See the articles LABORATORY, FURNACE, AMALGAMATION, CÆMENTATION, FUSION, &c.

To the above-mentioned, Dr. Shaw adds a new ſet, *viz.* the air-pump, condenſer, digeſtor, microſcopes, burning concaves, priſms, lenſes, portable furnaces, and every other inſtrument that can be invented, or procured, of advantage to the art. See the articles AIR-PUMP, CON-

CONDENSER, DIGESTOR, MICROSCOPE, BURNING-GLASS, PRISM, LENS, and FURNACE.

There are two capital ways wherein chemiſtry divides its objects, by the ſeveral inſtruments above-mentioned, *viz.* into integrant parts, and into conſtituent parts. By integrant parts we underſtand ſimilar parts, or parts of the ſame nature with the whole, as filings of iron have the ſame nature and properties as bars of iron. Under this general operation fall thoſe particular ones of triture, limitation, ſolution, amalgamation, ſublimation, *&c.* And by conſtituent parts we mean diſſimilar parts, or parts of a different nature from the whole, as when artificial cinnabar is divided into the quickſilver and ſulphur; and under this general operation come all kinds of reſolutions. See TRITURE, LIMITATION, SOLUTION, *&c.*

Theſe two general operations of chemiſtry bear relation to two general ſtructures of bodies, *viz.* the aggregate, and the mixt. Aggregates, in their reſolution, conſtantly retain their mixture in every the ſmalleſt part or atom; but when mixts are reſolved, the mixture is deſtroyed, and two or more new aggregates are produced; thus when brandy is reſolved, ſpirit of wine, or alcohol, and water are produced. Every ſenſible mixt, or aggregate, is compoſed of many inſenſible ones. Before gold can become ſenſible to us, there muſt be a collection of numerous parts that are ſeparately inſenſible, though all of them perfect gold. The minuteſt grain of cinnabar has two different parts, ſulphur and quickſilver. The minuteſt grain of ſalt contains ſand and fixed ſalt; and when quickſilver is diſſolved in aquafortis, the leaſt aſſignable portion of the menſtruum contains a proportionable quantity of mercury to the whole. See ANALYSIS, ALCOHOL, GOLD, CINNABAR, SULPHUR, *&c.*

Either the integrant, or the conſtituent parts of bodies being once divided or reſolved, various occaſions in chemiſtry require them to be joined together again, for compoſing a whole like the original ſubject. This operation is the converſe of the former; thus by ſimple mixture we recompoſe brandy from alcohol and water, and by precipitation with a copper-plate, collect the quickſilver diſperſed in aquafortis. See the article SYNTHETIC *Chemiſtry*.

The reſolutions, mixtures, and compoſitions made by chemiſtry are extremely numerous, and may be increaſed *ad infinitum*. Brandy gently diſtilled by the balneum mariæ, as was ſaid before, is reſolved into ſpirit of wine and water. And to this claſs of reſolutions are referable all kinds of depurations, purifications, ſeparations, clarifications, *&c.* See DEPURATION, PURIFICATION, SEPARATION, CLARIFICATION, *&c.*

By mixture we produce all the artificial vitriols, ſoaps, glaſſes, *&c.* and can compound theſe again, in an almoſt infinite variety; ſo that of the reſolutions, mixtures, compoſitions, and recompoſitions, in chemiſtry, there ſeems to be no bounds; whence great room is left for the making of new chemical diſcoveries.

Philoſophical chemiſtry being, in the definition given by our learned author, a rational art; by which is meant, that it may be conducted by rule, and need not be left to accidental trial and caſual experiment, he endeavours to comprize the rules for conducting it under the following three.

Rule I. When a body is offered in order to have new properties diſcovered in it, different from thoſe general ones of figure, gravity, elaſticity, *&c.* which come under mathematical conſideration, let the body be reſolved by degrees into the ſimpleſt conſtituent parts it is any way capable of, by the inſtruments pointed out above; and let trial be made with each ſeparate part, on a variety of bodies, according to ſome analogy of a previous chemical knowledge, leading from one thing to another. In a ſure or probable method of ratiocination.

Rule II. Let the ſeveral parts obtained by the preceding analyſis be re-united, beginning with two, and proceeding gradually to the whole number; uſing at firſt the gentleſt degree, then the intermediate, and at laſt the higheſt degrees of heat and cold. Thus for example, join the fixed ſalt and oil of a plant together; firſt by ſimple digeſtion, and afterwards by boiling, which affords a third production, diſſimular to all the reſt, and known by the name of ſoap; ſo again melt the ſame fixed ſalt with the earth of a plant, and this will afford glaſs. Let the laſt attempt be to reunite all the ſeparated parts of the body, in order, if poſſible, to form the original ſubſtance again.

Rule III. In every operation performed, let the greateſt diligence and exactneſs of obſervation be uſed, with regard to all the principal phænomena and effects produced. Let the phænomena be duly regiſtered,

giſtred, tabled, conſidered, and compared together, after the ſtrict geometrical manner; the reſult whereof, if there be no conſiderable errors committed, will lead to a knowledge of the ſecret ſprings, motions, inſtruments, and means made uſe of by nature for producing effects. And thus, with the proper care and application, juſt canons or rules of practice may be formed. The following are what the Doctor calls imperfect axioms and canons, deduced from a number of experiments, and the preceding enquiry, for directing farther diſcoveries and improvements in chemical and natural knowledge.

1. We may learn that a true chemiſtry (as it may perhaps be juſtly called) is exerciſed by nature, in the vegetable, animal, mineral, marine, and atmoſpherical regions, and that by it all bodies are produced, converted, renovated, rapaired, and maintained; and that in the exact diſcovery, imitation, and controul of this natural chemiſtry, conſiſts the perfection of the artificial. 2. That neither the eye, nor all the ſenſes together, can give us any information of the latent properties of bodies, their natures, and uſes; but only particular trials and experiments, well attended to and conſidered. 3. That experiments are but a kind of dead things, unleſs they have a direct uſe in life, or tend to the raiſing axioms and canons for improving our knowledge, and extending our power over the works of nature. 4. That he who can chuſe fit ſubjects, and place them in proper matrices or including veſſels, ſupply them duly with air and water, heat and cold, may probably produce great effects in imitation of nature. 5. That nature points out three ways of producing phyſical effects, different in fineneſs, *viz.* in beds of earth, beds of water, and beds of atmoſphere; beds of earth for minerals, of water for fiſh, and of atmoſphere for birds, meteors, *&c.* the confines of theſe two for plants and animals, and a rarefied mixture of all matters for meteors. 6. That men may make uſe of the ſame inſtruments as nature does, *viz.* fire, air, water, and earth, and conſequently produce the ſame kind of effects, if ſkill, that is knowledge, be not wanting: whence to improve in knowledge, is to improve in arts. 7. That chemiſtry is not confined to the uſe of fire only, but, in imitation of nature, may employ cold, air, water, and earth, upon matter, in various degrees of ſimplicity, combination, and mixture, which ſhews an extenſive method of enlarging the bounds of the art. 8. That fire is not only an analyſer in ſome caſes, but alſo a mixer of bodies in others, and this to the advantage of chemiſtry. For if it only ſeparated, it could produce but few effects, in compariſon of that infinite variety it now produces, both by mixture and ſeparation. 9. That it might be proper to try the reciprocation of heat and cold in chemical operations, after the manner of nature in day and night, ſummer and winter. 10. That body in all its forms is the object of chemiſtry, not conſidered mathematically nor mechanically, but operatively and effectively. 11. That the atoms, or primary ſmall compoſitions of bodies, are inſenſible to us. Thus the firſt particles of gold, ſalts, metals, and minerals, may float in the air, and not be perceived by us till they aggregate or collect together, and make a ſenſible maſs, or produce a ſenſible effect. 12. That ſome operation of the mind is requiſite to digeſt, methodize, and regiſter chemical experiments and obſervations, without which we cannot underſtand the laws obſerved by nature in phyſical operations, nor be able to imitate them; the chemiſtry or regular proceſſes of the mind, being here as neceſſary as the corporeal operations themſelves.

Technical CHEMISTRY is defined to be the application of philoſophical chemiſtry to the immediate ſervice of an art, ſo as to invent, form, aſſiſt, promote, or perfect it in the large way of buſineſs. This branch of chemiſtry is, for the ſake of uſe and commodiouſneſs, divided by our author into four parts, as it relates to ſubjects of the animal, vegetable, and mineral kingdoms, or to ſeveral of them at once. Thus under animal arts comes the art of preparing ſize and glue, tanning, ivory-ſtaining, the dying in wool, ſilk, *&c.* Under vegetable arts comes the art of timber, or the ways of preſerving it ſound againſt the injuries of the weather, the ſea, *&c.* the art of making roſin, pitch, oil of turpentine, charcoal, potaſh, *&c.* the art of brewing and fermenting for wines, vinegars, *&c.* the art of ſugar-making and refining, the art of ſoap-making, *&c.* Under mineral arts come the arts of ſalt, copperas, vitriol, borax, pottery, metals, foundery, ſmithery, *&c.* And laſtly, under mixed arts come the art of paper, the art of ink, the art of ja-

panning, the art of glass, the art of pigments, the art of pharmacy, the art of fireworks, &c. all which are proper chemical arts, that fall under technical chemistry. See the articles SIZE, GLUE, &c.

Commercial CHEMISTRY is the application of both philosophical and technical chemistry, to the establishing, supporting, and improving any branch of trade and commerce. Commercial chemistry consists of three parts, *viz.* 1. The exercise of all the chemical arts in a large manner, so as to supply more than the demands of a single country, and afford a surplus of commodities for exportation and foreign consumption. 2. The various ways of condensing, curing, preparing, securing, and fitting natural and artificial commodities for carriage and transportation. And 3. The ways of supplying the chemical necessaries to voyagers and travellers, for founding, supporting, and improving trade, traffic, and commerce, in different countries.

It is by means of technical and commercial chemistry together, that different countries are supplied with lead, tin, iron, silver, oil, tallow, tanned hides, pitch, rosin, brimstone, wax, wines, brandies, salt, sugars, treacle, paper, &c. whereby all trades, traffic, and commerce are supported. And to discover this kind of contrivances or reductions, is the office of commercial chemistry; thus instead of importing many tuns of a foreign-dying wood, we are taught to extract its tinging parts, and bring them away in the quantity of a few pounds. It affords the necessaries for long trading voyages; it directs to the certain rules of discovering the sophistications practised in wines, brandies, vinegars, arracks, gold-sand, gold-bars or ingots, counterfeit gems, &c. and to the way of assaying pot-ash, tincal, ambergrease, musk, and all the drugs, &c. See the articles IRON, SILVER, OIL, &c.

Oeconomical CHEMISTRY is the application of philosophical, technical, and commercial chemistry, to the service and accommodation of a family, being of great use and extent, so as to be capable of improving all the rest. This branch is divided with regard to the several offices of a house, wherein, as in so many different laboratories, it may be commodiously practised; for instance, in the brew-house, the store-room, the kitchen, the dairy, the laundry, and the cellar. Thus by means of oeconomical chemistry, we are instructed in the best ways of procuring and brewing with malt, treacle, honey, sugar, or other vegetable juices; the best ways of raising and of preserving yeast or wine-lees, for baking or brewing, and of imitating the natural wines of foreign growth. This art directs us how to procure the simple and compound waters of vegetables in their greatest perfection, and to make a set of brandies or cordial waters, even from the gross lees, sediments, or bottoms of our wine or ale-casks. Hence also we learn the method of preserving fruits in sugar, and several vegetable productions in the way of pickle, &c. and the art of cookery is also improveable by this means. See the articles BREWING, &c.

Analytical CHEMISTRY, that part of chemistry which teaches the art of analysing vegetable, animal, and mineral substances, and resolving them into different parts or principles. See ANALYSIS.

Synthetic or *Synthetical* CHEMISTRY. See the article SYNTHETIC.

With respect to the well-known enthusiasm of the chemists, there are some causes to be assigned why those who first cultivated this art, were so extremely addicted to fiction. Chemistry was formerly in the hands of miners and smelters of metals; men unacquainted with the liberal sciences, condemned to lead their lives in darkness, under ground, and to support their wretched beings with coarse and hard fare; besides, these men were daily obnoxious to a thousand dangers, dreading what might happen, disturbed in mind, and leading a very uneasy life. Under these circumstances they gave their attention to superstitious tales and fabulous stories. These and many other circumstances that might be named, gave occasion to the revival of these absurd notions of the Magi, Chaldeans, and Persians, that the fire was God, &c. Some among the chemists tried the magic arts of Zoroaster; some, with Plato, imagined demons existing every where: there was nothing but what they bedaubed with their commentaries, types, and riddles; the fanatical humour at last prevailing to such a degree, as to change the history of facts, and the miracles wrought in confirmation of the gospel, into the maxims of alchemy. See ALCHEMY.

At the declension of the eastern empire, chemistry shared the common fate of the other arts, and lay buried and neglected, till the time of friar Bacon, by whom it

was in a great measure retrieved. He was followed by Raymund Lully, Basil Valentine, Paracelsus, Van Helmont, Mr. Boyle, Boerhaave, Shaw, Geoffroy, Neumann, &c.

CHEMOSIS, a disease of the eyes, proceeding from an inflammation, when the white of the eye swells above the black, and overtops it to such a degree, that there appears a sort of gap between them.

Others define it to be an elevation of the membrane which surrounds the eye, and is called the white; being an affection of the eye, like white flesh.

CHENOPODIUM, in botany, a genus of the pentandria-digynia class of plants, comprehending goose-foot, english mercury, and stinking orrach.

It has no flower petals, nor pericarpium, except the cup, which contains a single, orbicular, and depressed seed.

CHEPELIO, an island in the bay of Panama, and province of Darien, in South America, situated about three leagues from the city of Panama, which it supplies with provisions: west long. 81°, north lat. 9°.

CHEPSTOW, a market-town in Monmouthshire, situated on the river Wye, near its mouth, about ten miles south of Monmouth: west longitude 2° 40′, north latitude 51° 40′.

CHEQ, or CHERIF, the prince of Mecca, who is, as it were, high priest of the law, and sovereign pontiff of all the mahometans, of whatever sect or country they be. See the article CALIPH.

The grand signior, sophies, mogols, kans of Tartary, &c. send him yearly presents, especially tapestry to cover Mahomet's tomb withal, together with a sumptuous tent for himself, and vast sums of money to provide for all the pilgrims, during the seventeen days of their devotion.

CHERBURG, a port-town of France, in the province of Normandy, situated on a bay of the english channel, opposite to Hampshire, in England: west long. 1° 40′, north lat. 49° 45′.

CHEREF, or CHERIF, is a title assumed by the emperors of Morocco. See the articles CHEQ and CALIPH.

CHEREM, in jewish antiquity, the second and greater sort of excommunication among the Jews.

The cherem deprived the excommunicated person of almost all the advantages of civil society: he could have no commerce with any one, could neither buy nor sell, except such things as were absolutely necessary for life; nor resort to the schools, nor enter the synagogues; and no one was permitted to eat or drink with him.

The sentence of cherem was to be pronounced by ten persons, or at least in the presence of ten; but the excommunicated persons might be absolved by three judges, or even by one, provided he were a doctor of the law. The form of this excommunication was loaded with a multitude of curses and imprecations, taken from different parts of the scripture.

CHERESOUL, the capital of Curdistan, in asiatic Turky, and the seat of the beglerbeg, or viceroy, of the province: east long. 45°, north lat. 36°.

CHERLERIA, in botany, a genus of the decandria-trigynia class of plants: the flower has properly no petals; the nectaria are five in number, roundish and emarginated, very small, and placed in a circular direction: the fruit is a capsule of an ovated figure, formed of three valves, and containing three cells: the seeds are numerous, convex on one side, and angulated on the other.

CHERMES, in zoology, a genus of four-winged insects, the characters of which are these: its rostrum, or trunk, is situated under the breast; the abdomen is mucronated or pointed at the hinder extremity; and the legs are formed for leaping.

These insects, which are called in english *bugs*, take particular denominations from the trees or plants on which they feed; as the chermes ulmi, or elm-bug, the fir-bug, the birch-bug, the maple-bug, the willow-bug, the nettle-bug, &c.

CHERRY-TREE, *cerasus*, in botany. See the article CERASUS.

If these trees are planted against walls, it is adviseable to set dwarfs between the standards, to cover the lower part of the wall, while these last spread over the upper part; and when the dwarfs grow up to fill the whole wall, the standards should be taken away.

The best cherries for eating are those of a hard substance, when fully ripe; the soft and watry ones being of a cold and putrescent nature; the sour kinds are also preferable to the sweet. Eaten in moderation, they quench thirst, and create an appetite, especially if boiled with a good quantity of sugar to them.

CHERRY likewiſe makes part of the engliſh name of ſeveral other trees: thus the *malpighia* of authors is called Barbadoes or cow-hedge cherry; the *padus*, bay-cherry, bird-cherry, or laurel-cherry; the *cornus*, cornel cherry, *&c.* See the article MALPIGHIA, *&c.*

CHERRY-BRANDY, a drink made of brandy, with the addition of black-cherries. A bottle being half filled with theſe, is filled up with brandy, and ſhaken ſeveral times: in a month's time it will be ready to drink. To ſweeten it, as well as to improve the flavour, ſome add ſugar and a few raſpberries.

CHERRY WINE is made of the expreſſed juice of cherries, to every two gallons of which two pounds of ſugar are added: this done, it is put into a veſſel to ferment, and after ſtanding two months in the caſk, is bottled off with a little ſugar for uſe.

CHERRY-ISLE, in geography, an iſland ſituated in the north or frozen ocean, between Norway and Greenland: eaſt longitude 20°, north latitude 75°.

CHERSO, the capital of an iſland of the ſame name, in the gulph of Venice, and ſubject to the Venetians: eaſt longitude 15°, north latitude 45° 25′.

CHERSONESUS, χερσονησος, among geographers, the ſame with a peninſula. See the article PENINSULA.

CHERTSEY, a market-town of Surry, about ſeven miles weſt of Kingſton: weſt longitude 30°, north latitude 51° 25′.

CHERUB, or CHERUBIN, a celeſtial ſpirit, which in the hierarchy is placed next to the ſeraphim. See the article HIERARCHY. The ſeveral deſcriptions which the ſcripture gives us of cherubins, differ from one another: but all agree in repreſenting a figure compoſed of various creatures, as a man, an ox, an eagle, and a lion.

CHERUBIN was alſo the name of an antient military order in Sweden, otherwiſe called the order of Seraphim. It was inſtituted by Magnus IV. and aboliſhed by Charles IX. It took its denomination from the golden figures of cherubims, whereof the collar of the order was compoſed.

CHERUBICAL HYMN, a hymn of great note in the antient chriſtian church. It was likewiſe called triſagium, or thrice holy, becauſe the form of it was in theſe words, *Holy, holy, holy, Lord God of hoſts*, &c.

The ſame form of words, with ſome alterations, is uſed to this day in our church, making part of the hymn, Te Deum laudamus.

CHERVIL, *chærophyllum*, in botany, *&c.* See the article CHÆROPHYLLUM.

CHERWEL, a river, which, ariſing in Northamptonſhire, runs ſouthwards by Banbury, and unites its waters with thoſe of the Iſis, near Oxford.

CHESHAM, a market-town of Buckinghamſhire, about nine miles ſouth-eaſt of Aileſbury: weſt longitude 35′, north latitude 51° 36′.

CHESHIRE, a maritime county of England, bounded by Staffordſhire on the eaſt, and by the Iriſh ſea on the weſt: its chief commodities are ſalt and cheeſe, the laſt of which is much eſteemed all over Britain.

CHESNUT-TREE, the engliſh name of the caſtanea of botaniſts. See the article CASTANEA.

Next to oak, the cheſnut-timber is moſt coveted by carpenters and joiners. It likewiſe makes the beſt ſtakes, palliſadoes, vine-props, hop-poles, *&c.* and is alſo proper for mill timber, and water-works. It is likewiſe fit for cheſts, tables, bedſteads, columns, *&c.*

As to the fruit of this tree, the biggeſt cheſnuts are accounted beſt; which ſhould be kept a conſiderable time before they are uſed, by which means they become not only more ſavoury, but likewiſe more wholeſome.

Horſe-CHESNUT, in botany, the ſame with the hippocaſtanum of authors.

Scarlet-horſe-CHESNUT, a name given to the pavia of botaniſts.

CHESS, an ingenious game, performed with different pieces of wood, on a board divided into ſixty-four ſquares or houſes; in which chance has ſo ſmall a ſhare, that it may be doubted whether a perſon ever loſt but by his own fault.

Each gameſter has eight dignified pieces, *viz.* a king, a queen, two biſhops, two knights, and two rooks; alſo eight pawns: all which, for diſtinction ſake, are painted of two different colours, as white and black.

As to their diſpoſition on the board, the white king is to be placed on the fourth black houſe from the corner of the board, in the firſt and lower rank; and the black king is to be placed on the fourth white houſe on the oppoſite or adverſary's end of the board. The queens are to be placed next to the kings, on houſes of their own colour. Next to the king and queen, on each hand, place the two biſhops;

biſhops; next to them, the two knights; and laſt of all, on the corners of the board, the two rooks. As to the pawns, they are placed, without diſtinction, on the ſecond rank of the houſe, one before each of the dignified pieces.

Having thus diſpoſed the men, the onſet is commonly begun by the pawns, which march ſtraight forward in their own file, one houſe at a time, except the firſt move, when it can advance two houſes, but never moves backwards: the manner of their taking the adverſary's men, is ſideways, in the next houſe forwards; where having captivated the enemy, they move forward as before. The rook goes forward or croſs-ways through the whole file, and back again. The knight ſkips backward and forward to the next houſe, ſave one, of a different colour, with a ſidling march, or aſlope, and thus kills his enemies that fall in his way, or guards his friends that may be expoſed on that ſide. The biſhop walks always in the ſame colour of the field that he is placed in at firſt, forward and backward, aſlope, or diagonally, as far as he liſts. The queen's walk is more univerſal, as ſhe takes all the ſteps of the before-mentioned pieces, excepting that of the knight; and as to the king's motion, it is one houſe at a time, and that either forward, backward, ſloping, or ſideways.

As to the value of the different pieces, next to the king is the queen, after her the rooks, then the biſhops, and laſt of the dignified pieces comes the knight. The difference of the worth of pawns, is not ſo great as that of noblemen; only, it muſt be obſerved, that the king's biſhop's pawn is the beſt in the field, and therefore the ſkilful gameſter will be careful of him. It ought alſo to be obſerved, that whereas any man may be taken, when he falls within the reach of any of the adverſary's pieces, it is otherwiſe with the king, who, in ſuch a caſe, is only to be ſaluted with the word *check*, warning him of his danger, out of which it is abſolutely neceſſary that he move; and, if it ſo happen that he cannot move without expoſing himſelf to the like inconveniency, it is check-mate, and the game is loſt.

CHESSE-TREES, two ſmall pieces of timber with a hole in them, on each ſide of a ſhip, a little before her looſ, for the main tackle to run through, and to which it is haled down.

CHEST, in commerce, a kind of meaſure, containing an uncertain quantity of ſeveral commodities.

A cheſt of ſugar, *v. g.* contains from ten to fifteen hundred weight; a cheſt of glaſs, from two hundred to three hundred feet; of caſtile ſoap, from two and an half to three hundred weight; of indigo, from one and an half to two hundred weight, five ſcore to the hundred.

CHEST, in anatomy, the breaſt, or that part of the body which contains the heart and lungs. See the article BREAST.

CHEST-TRAPS, a kind of boxes or traps with ſingle or double entries, for catching pole-cats, fitchets, marterns, *&c.*

CHESTER, the capital city of Cheſhire, ſituated ſixteen miles ſouth of Liverpool: weſt longitude 3°, north latitude 53° 15′. It is a biſhop's ſee, and gives the title of earl to the prince of Wales.

New CHESTER, the capital of a county of the ſame name in Penſilvania, in north America, ſituated on the river Delawar, ſouth of Philadelphia: weſt longitude 74°, north latitude 40° 15′.

Its harbour is fine and capacious, admitting veſſels of any burden.

CHESTERFIELD, a market-town of Derbyſhire, fifteen miles north of Derby: weſt long. 1° 25′, north lat. 53° 20′.

It gives the title of earl to a branch of the noble family of Stanhope.

CHEVAGE, or CHIEFAGE, a tribute of a certain ſum of money, formerly paid by ſuch as held lands in villainage to their lords, by way of acknowledgment, being a kind of poll, or head-money.

The word ſeems to have been uſed for a ſum of money paid yearly to a man of power for his patronage and protection. The Jews allowed to live in England, long paid chevage, or poll-money, *viz.* three-pence *per* head: it was paid at Eaſter.

CHEVAL DE FRISE. See the article CHEVAUX DE FRISE.

CHEVALER, in the manege, is ſaid of a horſe when in paſſaging upon a walk or a trot, his off fore-leg croſſes or overlaps the near fore-leg every ſecond motion.

CHEVALIER, in a general ſenſe, ſignifies a knight, or horſeman: but,

CHEVALIER, in heraldry, ſignifies any cavalier, or horſeman, armed at all points, by the Romans called cataphractus eques, now out of uſe, and only to be ſeen in coat-armour.

CHEVAUX DE FRISE, in fortification, a large joiſt, or piece of timber, about a foot in diameter, and ten or twelve in length,

length, into the ſides whereof are driven a great number of wooden pins, about ſix feet long, armed with iron points, and croſſing one another. See plate XLI. fig. 3.

The chief uſe of the chevaux de friſe, is to ſtop up breaches, or to ſecure the avenues of a camp, from the inroads both of horſe and foot. It is ſometimes alſo mounted on wheels, with artificial fires, to roll down in an aſſault.

CHEVERON, or CHEVRON, in heraldry. See the article CHEVRON.

CHEVIOT, or TIVIOT-HILLS, run from north to ſouth through Cumberland, and were formerly the borders or boundaries between England and Scotland, where many a bloody battle has been fought between the two nations, one of which is recorded in the ballad of Chevy-chaſe.

CHEVISANCE, in law, denotes an agreement or compoſition, as an end or order ſet down between a creditor and his debtor, *&c.*

In our ſtatutes, this word is moſt commonly uſed for an unlawful bargain, or contract.

CHEVRETTE, in the art of war, an engine for raiſing of guns or mortars into their carriages.

It is made of two pieces of wood, about four feet long, ſtanding upright upon a third ſquare piece: the upright pieces are about a foot aſunder, and pierced with holes exactly oppoſite to each other, having an iron bolt, which being put thro' theſe holes higher or lower, at pleaſure, ſerves with a hand-ſpike, which takes its poiſe over this bolt, to raiſe any thing by force. See plate XLI. fig. 4.

CHEVRON, or CHEVERON, in heraldry, one of the honourable ordinaries of a ſhield, repreſenting two raſters of an houſe, joined together as they ought to ſtand; it was antiently the form of the prieſteſſes head attire: ſome ſay, it is a ſymbol of protection; others, of conſtancy; others, that it repreſents knights ſpears, *&c.* It contains the fifth part of the field, and is figured as in plate XLI. fig. 5.

A chevron is ſaid to be abaſed, when its point does not approach the head of the chief, nor reach farther than the middle of the coat; mutilated, when it does not touch the extremes of the coat, cloven, when the upper pieces are taken off, ſo that the pieces only touch at one of the angles; broken, when one branch is ſeparated into two pieces; couched, when the point is turned towards one ſide of the eſcutcheon; divided, when the branches are of ſeveral metals, or when metal is oppoſed to colour; inverted, when the point is turned towards the point of the coat, and its branches towards the chief.

Per CHEVRON, in heraldry, is when the field is divided only by two ſingle lines, riſing from the two baſe points, and meeting in the point above, as the chevron does.

CHEVRONED, is when the coat is filled with an equal number of chevrons, of colour and metal.

CHEVRONEL, a diminitive of chevron, and as ſuch, only containing half a chevron.

CHEVRONNE, or CHEVRONNY, ſignifies the dividing of the ſhield ſeveral times chevron-wiſe.

CHEWING-BALLS, a kind of balls made of aſafœtida, liver of antimony, bay-wood, juniper-wood, and pellitory of Spain; which, being dried in the ſun, and wrapped in a linen-cloth, are tied to the bit of the bridle for the horſe to chew: they create an appetite; and it is ſaid, that balls of Venice-treacle may be uſed in the ſame manner with good ſucceſs.

CHIAMPA, the ſouth diviſion of Cochinchina, a country of the Eaſt-Indies.

CHIAN EARTH, in pharmacy, one of the medicinal earths of the antients, the name of which is preſerved in the catalogues of the materia medica, but of which nothing more than the name has been known for many ages in the ſhops.

It is a very denſe and compact earth, and is ſent hither in ſmall flat pieces from the iſland whoſe name it bears, and in which it is found in great plenty at this time. It ſtands recommended to us as an aſtringent. They tell us, it is the greateſt of all coſmetics, and that it gives a whiteneſs and ſmoothneſs to the ſkin, and prevents wrinkles, beyond any of the other ſubſtances that have been celebrated for the ſame purpoſes.

CHIAOUS, a word in the original Turkiſh ſignifying envoys, are officers to the number of five or ſix hundred in the grand ſignior's court, under the command of a chiaous baſchi. They frequently meet in the grand vizier's palace, that they may be in readineſs to execute his orders, and carry his diſpatches into all the provinces of the empire. The chiaous baſchi aſſiſts at the divan, and introduces thoſe who have buſineſs there.

CHIAPA, the capital of a province of the ſame

ſame name in Mexico, ſituated about 300 miles eaſt of Acapulco: weſt longitude 98°, north latitude 16° 30′.

CHIARASCO, a fortified town of Piedmont, in Italy, ſituated on the river Tanaro, twenty miles ſouth-eaſt of Turin, and ſubject to the king of Sardinia: eaſt longitude 7° 45′, north latitude 44° 40′.

CHIARENZA, a port-town on the north-weſt coaſt of the Morea, oppoſite to the iſland Zant, in the Mediterranean, and ſubject to the Turks: eaſt longitude 21° 15′, north latitude 37° 35′.

CHIARI, a town of Italy, in the province of Breſica, in the territories of Venice, about twenty-ſeven miles eaſt of Milan: eaſt long. 10° 18′, north lat. 45° 30′.

CHIARO-SCURO, among painters. See the article CLARO-OBSCURO.

CHIAVENNA, a town of the Griſons, ſituated north of the lake of Como, in Italy, and thirty-five miles ſouth of Coire: eaſt longitude 9° 30′, north lat. 46° 15′.

CHIAUSI, in the turkiſh affairs, officers otherwiſe called mutes, employed in executing perſons of diſtinction; the orders for doing which, are ſent them by the grand ſignior, wrapped up in a black cloth.

CHICANE, or CHICANRY, in law, an abuſe of judiciary proceedings, tending to delay the cauſe, to puzzle the judge, or impoſe upon the parties.

CHICANE, in the ſchools, is applied to vain ſophiſms, diſtinctions and ſubtleties, which protract diſputes and obſcure the truth.

CHICHES, or CHIC-PEASE, the ſame with the cicer of botaniſts. See CICER.

CHICHESTER, the capital city of Suſſex, ſituated fifty-two miles ſouth-weſt of London, and twelve miles eaſt of Portſmouth: weſt longitude 50′, north latitude 50° 50′.

It is a biſhop's ſee, and ſends two members to parliament.

New CHICHESTER, a port town of Penſilvania, ſituated on the river Delawar, below Cheſter. See the article CHESTER.

CHICK, or CHICKEN, in zoology, denotes the young of the gallinaceous order of birds, eſpecially the common hen. See the articles GALLINACEOUS and HATCHING.

Chickens, for two days after hatching, require no meat; but then it is proper to give them, for the firſt time, ſmall oat-meal, ſome dry, and ſome ſteeped in milk, or elſe fine white bread crumbs; and after they have got ſtrength, curds, cheeſe parings, &c. It is alſo very wholeſome to chop green chives among their meat, which will preſerve them from the rye, and other diſeaſes in the head: neither muſt they at any time be ſuffered to want clean water, ſince puddle-water is apt to breed the pip. To have fat crammed chickens, let them be cooped up when the dam forſakes them, and fed with wheat-meal in milk made into a dough, and ſteeped in milk: by uſing this diet, they will be fat in two weeks.

CHICKEN-POX. See the article *Small* POX.

CHICK-WEED, *alſine*, in botany. See the article ALSINE.

Berry-bearing CHICK-WEED, the ſame with the cucubalus of botaniſts. See the article CUCUBALUS.

CHICKLING PEA, in botany, a name given to the lathyrus. See the article LATHYRUS.

CHICUITO, or CUYO, a province of South America, bounded by the province of La Plata on the north eaſt, and by Chili on the weſt.

CHIDLEY, or CHIMLEY, a market-town of Devonſhire, about eighteen miles north-weſt of Exeter: weſt longitude 4°, north latitude 51°.

CHIEF, a term ſignifying the head, or principal part of a thing or perſon. Thus we ſay, the chief of a party, the chief of a family, &c.

CHIEF, in heraldry, is that which takes up all the upper part of the eſcutcheon from ſide to ſide, and repreſents the ornaments uſed on a man's head. Plate XLI. fig. 6.

It is to take up juſt the third part of the eſcutcheon, as all other honourable ordinaries do, eſpecially if they are alone on the ſhield; but if there be ſeveral of them, they muſt be leſſened in proportion to their number, and the ſame holds when they are cantoned, attended and bordered upon by ſome other figures; then the painter or engraver may be allowed to bring them into a ſmaller compaſs, to the end that all that is repreſented about the ordinaries, may appear with ſome proportion and ſymmetry. Chiefs are very much varied, for they may be couvert, ſupported, crenellé, ſurmounted, abaiſé, rempli, dentillé, engreſlé, canellé, danché, nebulé, fleurdelezée, fleurenné, vair, echequeté, lozangé, burellé, patté, fretté, gironné, chaperonné, chappé, mantelé, emmanché, chauſſé, veſtu, or reveſtu. See the

the articles COUVERT, SUPPORTED, &c.

In CHIEF, imports ſomething borne in the chief part or top of the eſcutcheon.

CHIEF LORD, the feudal lord, or lord of an honour on whom others depend. See the articles LORD and HONOUR.

Holding in CHIEF. See the articles CAPITE and TENURE.

CHIEF *juſtice of the king's-bench and common pleas.* See the article JUSTICE.

CHIEF PLEDGE, the ſame with headborough. See the article HEADBOROUGH.

CHIEF POINT. See the article POINT.

CHIEFTAIN, denotes the captain, or chief, of any claſs, family, or body of men: thus, the chieftains, or chiefs, of the highland clans, were the principal noblemen or gentlemen of their reſpective clans.

CHIERI, a fortified town of Piedmont, in Italy, ſituated eight miles eaſt of Turin: eaſt long. 7° 45′, north latit. 44° 50′.

CHILBLAINS, in medicine, the ſame with what is otherwiſe called perniones. See the article PERNIONES.

CHILD, a term of relation to parent. We ſay, natural child, legitimate child, poſthumous child, &c.

Child, *infans*, in the civil law, denotes one under ſeven years of age.

The cuſtom has prevailed almoſt in all countries, and in all ages, of wrapping a young child in ſwaddling bands, leſt its limbs, being then tender and flexible, ſhould happen to be diſtorted. The Spartan nurſes, however, were ſo careful and experienced, that without uſing ſwaddling bands, their children were ſtraight and well proportioned. Moreover, the Lacedemonians, in the management of their children, were at great pains to uſe them to any ſort of meat, and ſometimes to bear the want of it; not to be afraid in the dark, or to be alone; nor to be froward, peeviſh, and crying, as children generally are, often thro' the impertinent care and fondneſs of thoſe who look after them.

Dr. Harris, in a treatiſe of the acute diſeaſes of children, takes them all to ariſe from the humours of the primæ viæ growing ſour and degenerating into acidities, which is confirmed from their ſour belchings and dejections. Hence all that is required to cure them, is to combat this acidity, which is to be effected two ways; by diſpoſing it to be evacuated, and by actual evacuation by rhubarb, and other gentle purgatives.

In the firſt caſe, no ſudorifics or cordials are to be uſed, but in lieu of them, crab's-eyes and claws, oyſter-ſhells, egg-ſhells, chalk, coral, &c. but above all theſe, he prefers old ſhells that have lain long on the ſea-ſhore expoſed to the heat of the ſun. Children are very obnoxious to the aphthæ, ſcabby eruptions, difficult dentition, epilepſy, worms, and rickets; for the cure of which, ſee each of theſe under its proper head. See alſo the articles INFANT, WEANING, &c.

Lord Bacon aſſigns for the reaſon of children's not being hairy, that they are more perſpirable than adult perſons.

CHILD-BED, CHILD-BIRTH, } See DELIVERY.

CHILD-WIT, a fine impoſed upon a bondwoman, got with child without the conſent of her lord. Within the manor of Writtle, in the county of Eſſex, every reputed father of a baſe child pays to the lord 3 s. 4 d. for a fine; and this penalty extends to free as well as bond women.

Charity CHILDREN. See CHARITY-SCHOOLS and HOSPITAL.

CHILDERMAS-DAY, or INNOCENT'S-DAY, an anniverſary held by the church, on the 28th of December, in commemoration of the children at Bethlehem, maſſacred by order of Herod.

CHILI, a province of South America, bounded by Peru on the north, by the province of La Plata on the eaſt, by Patagonia on the ſouth, and by the Pacific ocean on the weſt; lying between 25° and 45° ſouth lat. and between 75° and 85° weſt longit. But ſome comprehend Patagonia and Chili, extending it to Cape Horn, in 57° 30′ ſouth latitude.

CHILIAD, denotes a thouſand of any things, ranged in ſeveral diviſions, each whereof contains that number.

CHILIARCHA, or CHILIARCHUS, in antiquity, a military officer, who had the command of a thouſand men.

CHILMINAR, CHELMINAR, or TCHELMINAR, the moſt beautiful piece of architecture remaining of all antiquity, being the ruins of the famous palace of Perſepolis, to which Alexander the great, in a drunken fit, ſet fire, at the inſtigation of Thais the courtezan: the word comes from the perſian *tcheble minar*, that is to ſay, forty towers.

Don Garcias de Silva Figueroa, Pietro della Valle, Sir John Chardin, and Le Brun have been very particular in deſcribing theſe ruins.

There appear (ſay they) the remains of near fourſcore columns, the fragments of

of which are at leaſt ſix feet high; but there are only nineteen can be called entire, with another detached from the reſt, about an hundred and fifty paces: a rock of hard black marble ſerves as a foundation to the edifice: the firſt plan of the houſe is aſcended to by ninety-five ſteps, all cut in the rock; the gate of the palace is about twenty feet wide, with the figure of an elephant on one ſide, and that of a rhinoceros on the other, thirty feet high, and both of poliſhed marble: near theſe animals there are two columns, and not far from thence the figure of a pegaſus. After paſſing this gate, are found fragments of magnificent columns in white marble, the ſmalleſt of which are fifteen cubits high, the largeſt eighteen, having forty flutings three full inches wide each; from whence we may judge of their thickneſs and other proportions. Near the gate is ſeen an inſcription on a ſquare piece of black marble, containing about twelve lines; the characters are of an extraordinary figure, reſembling triangles, or pyramids: beſides this there are other inſcriptions, the characters of which reſemble the hebrew, chaldaic, ſyriac, others the arabic, or perſian; and others, in fine, the greek characters. Dr. Hyde, who hath explained the greek inſcription, by ſupplying ſome words that are effaced, obſerves that the inſcriptions are engraved very negligently, and perhaps by ſome ſoldiers; or, if they are the work of an engraver, he thinks that he was from Palmyra, and conſequently that they are in the phœnician tongue: he adds, that as they are in praiſe of Alexander, they were probably done in the time of that conqueror.

CHILTERN, a chain of chalky hills, running from eaſt to weſt through Buckinghamſhire.

CHIMÆRA, or CHIMERA. See the article CHIMERA.

CHIMÆRA, in geography, a port-town of Turky, in Europe, ſituated at the entrance of the gulph of Venice, in the province of Epirus, about thirty-two miles north of the city Corfu, near which are the mountains of Chimæra, which divide Epirus from Theſſaly: eaſt longitude 20° 40′, and north latitude 40° 20′.

CHIMAY, the name of a great lake, lying in the province of Acham, between the Eaſt Indies and China.

CHIMAY is alſo the name of a town of Hainalt, in the french Netherlands, about twenty miles ſouth of Charleroy: eaſt lon. 4° 20′, and north lat. 50° 6′.

CHIMERA, or CHIMÆRA, a fabulous monſter which the poets feign to have the head of a lion, the body of a goat, and the tail of a dragon; and add, that this odd beaſt was killed by Bellerophon. The foundation of the fable was, that in Lycia there was a burning mountain, or vulcano, of this name; that the top of this mountain was ſeldom without lions, nor the middle, which had very good graſs, without goats; that ſerpents bred at the bottom, which was marſhy; and that Bellephoron rendered the mountain habitable.

By a chimera, among the philoſophers is underſtood a mere creature of the imagination, compoſed of ſuch contradictions and abſurdities as cannot poſſibly any where exiſt but in thought.

CHIMES *of a clock*, a kind of periodical muſic, produced at equal intervals of time, by means of a particular apparatus added to a clock.

In order to calculate numbers for the chimes, and adapt the chime-barrel, it muſt be obſerved that the barrel muſt turn round in the ſame time that the tune it is to play requires in ſinging. As for the chime-barrel, it may be made up of certain bars that run athwart it, with a convenient number of holes punched in them to put in the pins that are to draw each hammer; and theſe pins, in order to play the time of the tune rightly, muſt ſtand upright, or hang down from the bar, ſome more, ſome leſs. To place the pins rightly, you may proceed by the way of changes on bells, *viz.* 1, 2, 3, 4; or or rather make uſe of the muſical notes. Obſerve what is the compaſs of your tune, and divide the barrel accordingly from end to end: thus in the following examples each of theſe tunes are eight notes in compaſs, and therefore the barrel is divided into eight parts: theſe diviſions are ſtruck round the barrel, oppoſite to which are the hammer-tails; but when two notes of the ſame ſound come together in a tune, there muſt be two hammers to that bell to ſtrike it. Then you are to divide it round about, into as many diviſions as there are muſical bars, ſemibriefs, minims, &c. in your tune; thus the hundredth Pſalm tune hath twenty ſemibriefs, the firſt note of it is alſo a ſemibrief, and therefore on the chime-barrel muſt be a whole diviſion from 5 to 5; as may be underſtood by conceiving

the ſurface of a chime barrel to be repreſented by the following tables, as if the cylindrical ſuperficies of the barrel were ſtretched out at length, or extended on a plane; and then ſuch a table ſo dotted or divided, if it were to be wrapped round the barrel, would ſhew the places where all the pins are to ſtand in the barrel: for the dots running about the table, are the places of the pins that play the tunes.

The notes of the hundredth Pſalm.



A table for dividing the chime-barrel of the hundredth Pſalm.



If you would have your chimes complete, you ought to have a ſet of bells to the gamut notes, ſo as that each bell having the true ſound of ſol, la, mi, fa, you may play any tune, with its flats and ſharps, nay even the baſs and treble, with one barrel. And by ſetting the names of your bells at the head of any tune, you may transfer that tune to your chime-barrel, without any ſkill in muſic; but obſerve that each line in the muſic is three notes diſtant, that is, there is a note between each line, as well as upon it

CHIMIN, or CHEMIN, in law, denotes a road, or way. Hence,

CHIMINAGE is a toll for wayfaring, or paſſage, through a foreſt.

CHIMNEY, in architecture, a particular part of a houſe, where the fire is made, having a tube or funnel to carry away the ſmoke.

The parts of the chimney are the jambs, or ſides, coming out perpendicularly, ſometimes circularly, &c. from the back; the mantle-tree, which reſts on the jambs; the tube, or funnel, which conveys away the ſmoke; the chimney-piece, or moulding, which is on the fore ſide of the jambs, over the mantle-tree; and the hearth, or fire-place.

The rules for building chimneys are, 1. That no timber be laid within twelve inches of the fore ſide of the chimney-jambs. 2. That all the joiſts on the back of any chimney be laid with a trimmer. 3. That no timber be laid within the funnel of any chimney.

The proportion for CHIMNIES. Palladio lays down the following proportions for the breadth and depth on the inſide, and for their height to their mantle-tree.

Chimnies in	Breadth.	Height.	Depth.
Halls	6, 7, or 8 feet	4 ½ or 5 feet.	2 ½ or 3 feet.
Chambers	5 ½, 6, or 7 feet.	4 or 4 ½ feet.	2 or 2 ½ feet.
Studies and wardrobes	4, 4 ½, or 5 feet.	4 or 4 ½ feet.	2 or 2 ½ feet.

Nevertheleſs in theſe points a workman ſhould be rather governed by the modern faſhions, than by the dictates of an antient architect.

Wolfius directs that the breadth of the aperture at the bottom be to the height as 3 to 2, and to the depth as 4 to 2.

In ſmall apartments the breadth is 3 feet, in bed-chambers 4, in larger apartments 5, in ſmall banqueting rooms 5 ½, in larger 6; but the height ſhould never exceed 2 ½, leſt there be too much room for air and wind, and the ſmoke be driven into the room: nor muſt the height be too little, leſt the ſmoke miſs its way and be choaked at firſt ſetting out. The ſame author adviſes to have an aperture thro' which the external air may, on occaſion, be let into the funnel, to drive up the ſmoke, which the internal air would otherwiſe be unable to do.

Some make the funnel twiſted, to prevent the ſmoke's deſcending too eaſily; but a better expedient is, to make the funnel narrower at bottom than at top; the fire impelling it up more eaſily, when contracted at the bottom; and in mounting it finds more ſpace to diſengage itſelf, and therefore will have leſs occaſion to return into the room.

Mr. Felibien directs, that the mouth of the tube, or that part joined to the chimney back, be made a little narrower than the reſt, that if the ſmoke be repelled downwards, it may be prevented from getting into the room by this obſtacle.

To

To prevent ſmoking chimnies, Mr. Lucas adviſes to leave two holes, or make two pipes in the chimnies, one over the other on each ſide, one ſloping upwards, the other downwards; through theſe holes or pipes, ſays he, the ſmoke will eaſily paſs out of any funnel which way ſoever the wind blows.

Philip d'Orme adviſes to provide a hollow braſs-ball, of a reaſonable capacity, with a ſmall hole on one ſide, for the putting in water; that this ball be hung up in the chimney, at a little height above the greateſt flame (with the hole upwards) by an iron-wire that ſhall traverſe the chimney, a little above the mantle-tree, where, as the water grows hot, it will rarefy, and drive through the hole or aperture in a vapoury ſteam, that will throw up the ſmoke, which would otherwiſe linger in the funnel.

Others place a kind of moveable vane or weather-cock on the top of the chimney, ſo that what way ſoever the wind comes, the aperture of the chimney will be ſcreened, and the ſmoke have free egreſs. But the beſt prevention of a ſmoking chimney ſeems to be in the proper placing of the doors of a room, the apt reclination of the back, and the due gathering of the wings and breaſt of a chimney.

CHIMNEY-HOOKS are hooks of ſteel or braſs put into the jambs of chimnies, one into each jamb, for the handle of the fire-tongs and fire-pan to reſt in.

CHIMNEY JAMBS, the ſides of a chimney, ſometimes ſtanding out perpendicularly, ſometimes circularly, from the back, on the extremities whereof the mantle-tree reſts.

CHIMNEY-MONEY, or HEARTH-MONEY, a tax impoſed by ſtatute 24 Car. II. expreſſing that every fire-hearth and ſtove of every dwelling or other houſe within England and Wales, except ſuch as pay not to church and poor, ſhall be chargeable with two ſhillings *per annum*, payable at Michaelmas and Ladyday, to the king and his heirs. This tax being much complained of, as burdenſome to the people has been aboliſhed, and inſtead of it the window-tax was granted.

CHIMNEY-PIECE, a compoſition of certain mouldings of wood or ſtone, ſtanding on the fore ſide of the jambs, and coming over the mantle-tree.

CHIMPANZEE, in zoology, the name of a ſpecies of angola-monkey, very much reſembling the human ſhape; the males of which are ſo bold and fierce as to fight an armed man: they naturally walk erect, and are ſaid to ſet upon and raviſh the negroe women, when they meet them in the woods.

CHINA, including Chineſe Tartary, a large empire, ſituated between 95° and 135° eaſt longitude, and between 21° and 55° north latitude, being accounted two thouſand miles in length, and one thouſand five hundred in breadth; it is bounded by Ruſſian Tartary on the north, by the Pacific ocean on the eaſt and ſouth, and by Tonquin, Tibet, and the territories of Ruſſia on the weſt. It is uſually divided into ſixteen provinces, which will be deſcribed in their alphabetical order. In theſe provinces there are computed to be one hundred and fifty-five capital cities, one thouſand three hundred and twelve of the ſecond rank, two thouſand three hundred and fifty-ſeven fortified towns, and upwards of ten millions of families, which may amount to about fifty millions of people.

The principal commodities of this country are ſilk, tea, china-ware, japan-ware, and gold duſt; of all which the maritime ſtates of Europe import great quantities, ſending them ſilver in return.

CHINA-CHINA, in pharmacy, the ſame with quinquina. See QUINQUINA.

CHINA-ROOT, in pharmacy, a medicinal root, brought both from the Eaſt and Weſt-Indies, thence diſtinguiſhed into oriental and occidental; it is the root of the plant ſmilax. See SMILAX.

The oriental root is brought to us in large pieces, from ſeveral parts in the Eaſt-Indies. The occidental is brought from Peru and the Braſils. This root is to be choſen hard and firm, of a faint red colour, free from worms and rottenneſs, and ſuch as on chewing fills the mouth with a ſoft unctuous moiſture.

This root is a ſudorific and an attenuant, and is therefore calculated to do great ſervice in many chronic caſes: it is beſt given in decoction, and is uſually combined with ſarſaparilla and guaiacum; an ounce of it, ſliced thin, is the uſual proportion to a quart.

CHINA-WARE, a fine kind of earthern-ware, otherwiſe called porcelain. See the article PORCELAIN.

CHINCA, a port-town of Peru, in South-America, ſituated in an extenſive valley, on a river of the ſame name, about ſixty miles ſouth of Lima: weſt longitude 76°, and ſouth latitude 13°.

CHIN-COUGH, a convulſive kind of

cough, which children are chiefly ſubject to, proceeding from a tough, viſcid, and acid matter, lodged in the coats of the ſtomach, which when they vomit, they are eaſy for a time.

Sometimes this diſorder proceeds from a more dangerous cauſe, which is a certain ſalt communicated to tender bodies by means of the air, which coagulates the lymph, and which growing ſharp and ſtagnating, affects the larynx.

In the cure of this cough, particular care muſt be had to the ſtomach, and without a vomit the cure can hardly be effected. Sperma ceti in broth is of excellent uſe; but by bleedings and repeated purges this cough may be cured, without other means; yet the milder cathartics ought here to take place. Drinks and liquid aliments ſhould alſo be taken in leſs quantity than uſual.

CHINE, in the manege, the ſame with a horſe's back bone.

CHINESE, in general, denotes any thing belonging to China. See CHINA.

It is obſerved by ſome, that the chineſe language has no analogy with any other language in the world: it only conſiſts of three hundred and thirty words, which are all monoſyllables, at leaſt they are pronounced ſo ſhort that there is no diſtinguiſhing above one ſyllable or ſound in them; but the ſame word, as pronounced with a ſtronger or weaker tone, has different ſignifications; accordingly when the language is accurately ſpoke, it makes a ſort of muſic, which has a real melody, that conſtitutes the eſſence and diſtinguiſhing character of the chineſe tongue.

As to the chineſe characters, they are as ſingular as the language; the chineſe have not, like us, any alphabet, containing the elements, or, as it were, the principles of their words: inſtead of an alphabet they uſe a kind of hieroglyphics, whereof they have above eighty thouſand.

CHINEY, a city of the auſtrian Netherlands, on the confines of the biſhopric of Liege, about twelve miles ſouth eaſt of Namur: eaſt longitude 5°, and north latitude 50° 20'.

CHINON, a town of France, in the province of the Orleanois, about twenty three miles ſouth-weſt of Tours: eaſt longitude 20', and north latitude 47°, 15'.

CHIO, CHIOS, XIO, or SCIO, an aſiatic iſland, lying near the coaſt of Ionia, in Natolia, or leſſer Aſia, about one hundred miles weſt of Smyrna. It is called by the Turks Sakiſaduci, and is about one hundred miles in circumference; being chiefly inhabited by chriſtians of the greek church, who are ſaid to have three hundred churches in the iſland.

CHIO is alſo the capital of the above iſland, ſituated on the eaſt coaſt: eaſt longitude 27°, and north latitude 38°.

CHIONANTHUS, SNOW-DROP-TREE, in botany, a genus of the diandria-monogynia claſs of plants: the corolla conſiſts of a ſingle petal, and is divided into four parts; the tube is very ſhort, no longer than the cup, and is petalous; the limb is divided into four extremely long ſegments, which are erect, acute, of a linear figure, and ſomewhat uneven; the fruit is a roundiſh unilocular berry, containing a ſingle ſtriated oſſicle for ſeed.

CHIOZZO, or CHIOGGIO, a town on an iſland of the ſame name, in the gulph of Venice, by which there is a paſſage into the Lagunes, ſituated about twelve miles ſouth of the city of Venice.

CHIPPENHAM, a borough town in Wiltſhire, about twenty-two miles north-weſt of Saliſbury: weſt longitude 2° 22', and north latitude 51° 25'.

It ſends two members to parliament.

CHIPPING, a phraſe uſed by the potters and china-men to expreſs that common accident both of our own ſtone and earthen ware, and the porcelain of China, the flying off of ſmall pieces, or breaking at the edges. Our earthern wares are particularly ſubject to this, and are always ſpoiled by it before any other flaw appears in them. Our ſtone wares eſcape it better than theſe, but leſs than the porcelain of China, which is leſs ſubject to it than any other manufacture in the world. The method by which the Chineſe defend their ware from this accident, is this: they carefully burn ſome ſmall bambou canes to a ſort of charcoal, which is very light, and very black; this they reduce to a fine powder, and then mix it into a thin paſte, with ſome of the varniſh which they uſe for their ware: they next take the veſſels when dried, and not yet baked, to the wheel, and turning them ſoftly round, they, with a pencil dipt in this paſte, cover the whole circumference with a thin coat of it: after this, the veſſel is again dried, and the border made with this paſte appears of a pale greyiſh colour when it is thoroughly dry. They work on it afterwards in the common way covering both

both this edge and the reſt of the veſſel with the common varniſh. When the whole is baked on, the colour given by the aſhes diſappears, and the edges are as white as any other part; only when the baking has not been ſufficient, or the edges have not been covered with the ſecond varniſhing, we ſometimes find a duſky edge, as in ſome of the ordinary thick tea-cups.

It may be a great advantage to our Engliſh manufacturers to attempt ſomething of this kind. The willow is known to make a very light and black charcoal; but the elder, tho' a thing ſeldom uſed, greatly exceeds it. The young green ſhoots of this ſhrub, which are almoſt all pith, make the lighteſt and the blackeſt of all charcoal; this eaſily mixes with any liquid, and might be eaſily uſed in the ſame way that the Chineſe uſe the charcoal of the bambou cane, which is a light hollow vegetable, more reſembling the elder ſhoots than any other Engliſh plant. It is no wonder that the fixed ſalt and oil contained in this charcoal ſhould be able to penetrate the yet raw edges of the ware, and to give them in the ſubſequent baking a ſomewhat different degree of vitrification from the other parts of the veſſel, which, tho' if given to the whole, it might take off from the true ſemivitrified ſtate of that ware, yet at the edges is not to be regarded, and only ſerves to defend them from common accidents, and keep them entire.

The Chineſe uſe two cautions in this application; the firſt in the preparation; the ſecond in the laying it on. They prepare the bambou canes for burning into charcoal, by peeling off the rind. This might eaſily be done with our elder ſhoots, which are ſo ſucculent, that the bark ſtrips off with a touch. The Chineſe ſay, that if this is not done with their bambou, the edges touched with the paſte will burſt in the baking: this does not ſeem indeed very probable; but the charcoal will certainly be lighter made from the peeled ſticks, and this is a known advantage. The other caution is, never to touch the veſſels with hands that have any greaſy or fatty ſubſtance about them; for if this is done, they always find the veſſel crack in that place.

CHIPPING, or MUCH-WICCOMB, a borough-town of Buckinghamſhire, about ten miles ſouth of Aileſbury: weſt longitude 42′, and north latitude 51° 35′. It ſends two members to parliament.

CHIRAGRA, in medicine, a term uſed to denote the gout in the hand or wriſt. See the article GOUT.

CHIROGRAPH, *chirographum*, in the time of the Saxons, ſignified any public inſtrument of gift or conveyance, atteſted by the ſubſcription and croſſes of witneſſes. Formerly, when they made a chirograph, or deed, which required a counter part, they ingroſſed it twice upon one piece of parchment, counterwiſe, having a ſpace between, wherein was wrote CHIROGRAPH, through the middle whereof the parchment was cut, ſometimes ſtraight, ſometimes indentedly, and a moiety given to each of the parties.

CHIROGRAPH was alſo antiently uſed for a fine: the manner of ingroſſing the fines, and cutting the parchment in two pieces, is ſtill retained in the chirographer's office.

CHIROGRAPHER *of fines*, an officer in the common pleas, who ingroſſes fines acknowledged in that court, into a perpetual record (after they are examined and paſſed by other officers) and writes and delivers the indentures thereof to the parties, one for the buyer, and another for the ſeller. He makes a third indented piece, containing alſo the effect of the fine, which he delivers over to the cuſtos brevium, and is called the foot of the fine. The chirographer alſo, or his deputy, proclaims all the fines in the court every term, according to the ſtatutes, and then repairing to the office of the cuſtos brevium, there endorſes the proclamations on the backſide of the foot thereof, keeping withal the writ of covenant, and alſo the note of the fine.

CHIROGRAPHY, χειρογραφια, a writing under one's own hand.

CHIROMANCY, χειρομαντια, a ſpecies of divination, drawn from the different lines and lineaments of a perſon's hand; by which means, it is pretended the inclinations may be diſcovered.

CHIRONIA, in botany, a genus of the pentandria-monogynia claſs of plants: the corolla is formed of a ſingle petal, and is equal; the tube is roundiſh, and of the ſize of the cup; the limb is divided into five equal oval ſegments, and patent; the fruit is of an oval figure, and contains two cells; the ſeeds are numerous and ſmall.

CHIRONOMY, *chironomia*, in antiquity, the art of repreſenting any paſt tranſaction by the geſtures of the body, more eſpecially by the motions of the hands; this made a part of liberal education; it had

had the approbation of Socrates, and was ranked by Plato among the political virtues.

CHIROTONY, *chirotonia*, among eccleſiaſtical writers, denotes the impoſition of hands uſed in conferring prieſtly orders. See the article ORDINATION.

However, it is proper to remark, that chirotony originally was a method of electing magiſtrates, by holding up of hands.

CHIRVAN, a province of Perſia, lying on the weſtern coaſt of the Caſpian ſea.

CHIRURGEON, the ſame with ſurgeon. See the article SURGEON.

CHIRURGERY, or SURGERY. See the article SURGERY.

CHISLEY-LAND, in agriculture, a ſoil of a middle nature between ſandy and clayey land, with a large admixture of pebbles.

CHISSEL, an inſtrument much uſed in carpentry, maſonry, joinery, ſculpture, &c. and diſtinguiſhed according to the breadth of the blade into half-inch chiſſels, quarter inch chiſſels, &c. They have alſo different names according to the different uſes to which they are applied; as, 1. The former, uſed by carpenters, &c. juſt after the work is ſcribed: it is ſtruck with a mallet. 2. The paring-chiſſel, which is uſed in paring off the irregularities made by the former: this is preſſed with the workman's ſhoulder. 3. The ſkew-former cleanſes acute angles with the point of its narrow edge. 4. The mortice-chiſſel, uſed in cutting deep ſquare holes in wood, for mortices: it is narrow, but thick and ſtrong, to endure hard blows. 5. Socket chiſſels, having their ſhank made with a hollow ſocket at top, to receive a ſtrong wooden ſprig fitted into it with a ſhoulder. 6. Ripping-chiſſel, having a blunt edge, with no baſil, uſed in tearing two pieces of wood aſunder. And, 7. The gouge. See the article GOUGE.

CHITOR, a city of Piedmont, in Italy, ſituated on the river Po, about ten miles north of Turin: eaſt longitude 7° 35′, and north latitude 45° 12′.

This is alſo the name of a province and city in the hither India, ſubject to the mogul: eaſt longitude 76°, and north latitude 23° 30′.

CHITTING, among gardeners, is ſaid of a ſeed when it firſt puts forth its ſlender roots.

CHIVALRY, in law, is a tenure of ſervice, whereby the tenant is bound to perform ſome noble or military office to his lord; and is either regal, when held only of the king; or common, ſuch as may be held of a common perſon as well as the king: the former is properly called ſerjeanty, and the latter eſcuage. See the articles SERJEANTY and ESCUAGE.

A ſtatute of Charles II. aboliſhes all tenures by chivalry, in capite, &c. and ordains that all tenures ſhall be conſtrued to be free and common ſoccage.

CHIUDENDO, in muſic, is the ending or finiſhing: thus we ſay, chiudendo col ritornello, col aria, to end with a ritornello, or with an air. See the article RITORNELLO.

CHIVES, among gardeners, denote the ſame with the antheræ or apices of botaniſts. See the article ANTHERÆ.

Some alſo call the whole ſtamina of plants chives. See the article STAMINA.

CHIVES is alſo the engliſh name of a very ſmall ſpecies of onion. See ONION.

CHIUSI, a city of Italy, in the dutchy of Tuſcany, ſituated on the confines of the pope's territories, about thirty-five miles ſouth eaſt of Sienna: eaſt of longit. 13°, and north latitude 43°.

CHLÆNA, in antiquity, a winter-garment, worn over the tunica.

It was likewiſe uſed as a covering for a bed.

CHLAMYS, in antiquity, a military habit worn by the antients over the tunica.

It belonged to the patricians, and was the ſame in the time of war, that the toga was in the time of peace. This ſort of gown was called picta, from the rich embroidery with figures in phrygian-work; and purpurea, becauſe the ground-work was purple. The chlamydes of the emperors were all purple, adorned with a golden or embroidered border.

CHLOROSIS, in medicine, a diſeaſe commonly called the green-ſickneſs, incident to girls, maids, widows, and even wives whoſe huſbands are deficient.

Various are the ſymptoms of this diſorder, as a feveriſh habit of body, vomiting, difficulty of breathing, and longing for unnatural foods.

As to the cure, Aſtruc recommends borax, mineral waters, electuaries made of preparations of ſteel, the martial flowers, &c. aſa fœtida, aloes and myrrh, emollient baths, frequent evacuations, and exerciſe; but above all, matrimony.

CHOCOLATE, in commerce, a kind of paſte

paſte, or cake, prepared of certain drugs, the baſis of which is the cacao-nut. See the article CACAO.

The Indians, in their firſt making of chocolate, uſed to roaſt the cacao in earthen pots, and having afterwards cleared it of the huſks, and bruiſed it between two ſtones, they made it into cakes with their hands. The Spaniards improved this method: when the cacao is properly roaſted, and well cleaned, they pound it in a mortar, to reduce it into a coarſe maſs which they afterwards grind on a ſtone, till it be of the utmoſt fineneſs: the paſte being ſufficiently ground, is put quite hot into tin moulds, in which it congeals in a very little time. The form of theſe moulds is arbitrary; the cylindrical ones, holding two or three pounds, are the moſt proper, becauſe the bigger the cakes are, the longer they will keep. Obſerve, that theſe cakes are very liable to take any good or bad ſcent, and therefore they muſt be carefully wrapt up in paper, and kept in a dry place. Complaints are made, that the Spaniards mix with the cacao-nuts too great a quantity of cloves and cinnamon, beſides other drugs without number, as muſk, ambergriſe, &c. The grocers of Paris uſe few or none of theſe ingredients; they only chooſe the beſt nuts, which are called caracca, from the place from whence they are brought, and with theſe they mix a very ſmall quantity of cinnamon, the freſheſt vanilla, and the fineſt ſugar, but very ſeldom any cloves. Among us in England, the chocolate is made of the ſimple cacao, excepting that ſometimes ſugar, and ſometimes vanilla is added.

Chocolate ready made, and cacao-paſte, are prohibited to be imported from any part beyond the ſeas. If made and ſold in Great-Britain, it pays inland duty 1 s. 6 d. *per* lb averdupoiſe; it muſt be incloſed in papers containing one pound each, and produced at the exciſe-office, to be ſtamped. Upon three days notice given to the officer of exciſe, private families may make chocolate for their own uſe, provided no leſs than half an hundred weight of nuts be made at one time.

CHOENIX, χοινιξ, in antiquity, ſignifies fetters in which the legs of criminals were made faſt, as we are informed by Ariſtophanes, in his Plutus, where ſpeaking of an inſolent ſlave, he ſaith,

αι χειρες δε σου βουσιν
Ιν, ω τας χοινικας ω τας πιδας πατησας.

That is as much as to ſay, Your legs are itching for the ſtocks.

CHOENIX was alſo a dry meaſure, containing a forty-eighth part of a medimnus, or ſix buſhels. Hence the celebrated proverb of Pythagoras, *Super chœnice ne ſedeas*; which is differently interpreted. See Plutarch in Sympoſiacis, Dem. Byz. apud Athenæum, &c.

CHOIR, that part of the church or cathedral where choriſters ſing divine ſervice: it is ſeparated from the chancel, where the communion is celebrated; and alſo from the nave of the church, where the people are placed; the patron is ſaid to be obliged to repair the choir of the church. It was in the time of Conſtantine that the choir was ſeparated from the nave. In the XIIth century, they began to incloſe it with walls; but the antient baluſtrades have been ſince reſtored, out of a view to the beauty of architecture.

The choir in nunneries, is a large hall adjoining to the body of the church, ſeparated by a grate, where the nuns ſing the office.

CHOLAGOGUES, medicines which purge the bile.

Of this kind are manna, caſſia, roſes, ſena, rhubarb, aloes, jalap, ſcammony, &c. There is ſome reaſon to think that antimonial medicines act more powerfully on the bile than any other remedies.

CHOLEDOCHUS, in anatomy, is a common epithet for the gall-bladder, the hepatic veſſels, and the common gall-duct which communicates with the duodenum.

CHOLER, or BILE. See BILE.

CHOLERA MORBUS, in medicine, the ſame with the bilious fever. See BILIOUS.

CHOLIC, or rather COLIC. See COLIC.

CHOMELIA, in botany, a genus of the pentandria-monogynia claſs of plants, the flower of which conſiſts of one infundibuliform or funnel-faſhioned petal, the limb of which is divided into five oval and reflex ſegments: the fruit is a roundiſh bilocular berry, containing four ſeeds, gibboſe on one ſide, and angulated on the other.

CHONAT, a town of Hungary, ſituated on the river Meriſh, about thirteen miles eaſt of Segedon, and ſubject to the houſe of Auſtria: eaſt longitude 21° 20′, and north latitude 46° 22′.

CHONDRILLA, in botany, a genus of the ſyngeneſia-polygamia-æqualis claſs of plants, the compound flower of which

is

is imbricated and uniform, the proper one monopetalous, ligulated, linear, truncated, and four or five times dentated; there is no pericarpium; the cup is of a cylindrical figure, containing ſolitary, ovated, compreſſed, ſcabrous ſeeds.

CHONDROGLOSSUM, in anatomy, the name of a pair of muſcles ariſing from the cartilaginous proceſs of the os hyoides, and meeting in the baſe of the tongue, where they are inſerted: this pair is not found in all ſubjects.

CHONDROPTERYGII, in ichthyology, one of the five orders or ſubdiviſions of fiſhes, the characters of which are theſe: the rays of the fins are cartilaginous, differing in little from the membrane that conſtitutes the fin; they have likewiſe cartilages inſtead of bones; and the mouth is for the moſt part ſituated in the lower part of the body.

Of this order there are only four genera, *viz.* the petromyzon, accipenſer, ſqualus, and raja. See the articles PETROMYZON, ACCIPENSER, *&c.*

CHOP-CHURCH, a nick-name given to parſons who make a practice of exchanging benefices.

It is uſed by an old ſtatute in the ſenſe of a trade; but Brooke, in his Abridgment, ſays it was only permiſſible by law.

CHOPIN, or CHOPINE, a liquid meaſure, uſed both in Scotland and France, and equal to half their pint. See the articles PINT and MEASURE.

CHORAGIUM, in antiquity, denotes all the theatrical habits, and other implements belonging to the chorus, and likewiſe the place where they were kept.

CHORAGIUM likewiſe ſignified the exequies of a young woman, who died before ſhe was marriageable.

CHORAGUS, in antiquity, the principal perſon or leader in the chorus.

The choragus hired the players, ſingers, dancers, *&c.* at the celebration of public feſtivals; in which ſenſe he anſwers to our manager. See the article CHORUS.

CHORASSAN, a province of Perſia, on the north eaſt, adjoining to Uſbec Tartary; this was the antient Bactria, and the native country of the late Kouli Kan.

CHORD, in geometry, a right line drawn from one part of an arch of a circle to the other. Hence,

CHORD *of an arch* is a right line joining the extremes of that arch: thus A B is the chord of the arch A E B, plate XLI. fig. 7.

CHORD *of the complement of an arch*, the chord that ſubtends the reſt of the arch, or ſo much as makes up the arch a ſemi-circle.

It is demonſtrated in geometry, that the radius C E (*ibid.*) biſecting the chord B A in D, does alſo biſect the arch in E, and is perpendicular to the chord A B. From hence may be deduced theſe problems: 1. To make a circle paſs through any three given points, not lying in a right line. 2. To find the center of any circle. 3. To complete a circle from an arch given. 4. To deſcribe a circle about any triangle given.

Line of CHORDS, one of the lines of the ſector and plane ſcale. See its deſcription and uſe under SECTOR and SCALE.

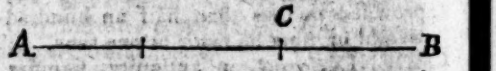
CHORDS or CORDS, in muſic, are ſtrings, by the vibration of which the ſenſation of ſound is excited, and by the diviſions of which the ſeveral degrees of tune are determined. See TUNE and SOUND.

The chords of muſical inſtruments are ordinarily made of cat-gut; though ſome are made of braſs or iron wire, as thoſe of harpſichords, ſpinnets, *&c.* Chords of gold-wire in harpſichords, would yield a ſound almoſt twice as ſtrong as thoſe of braſs; and thoſe of ſteel a feebler ſound than thoſe of braſs, as being both leſs heavy and leſs ductile.

Mr. Perrault obſerves, that of late they have invented a way of changing the chords, to render their ſounds more ſtrong without altering the tone.

The ſixth chord of baſs-viols, and the tenth of large theorbo-lutes, conſiſt of fifty threads, or guts, ſome of which are an hundred feet long, twiſted and poliſhed with equiſetum, or horſe tail.

The rules for dividing chords ſo as to conſtitute any given interval, are as follow: 1. To aſſign ſuch part of a chord A B as ſhall conſtitute any concord; for example, a fifth, or any other interval, with the whole cord: divide the line A B into as many parts as the greateſt number of the interval has units; thus the fifth being 2 : 3, the line is divided into



three parts: of theſe take as many as the leſſer number 2 = A C, then is A C the part ſought; that is, two lines whoſe lengths are to each other as A B to A C, make a fifth. Hence if it be required to find ſeveral different ſections of the line A B, for inſtance, ſuch as ſhall be octave, fifth, or third greater; reduce the given

ratios

Fig. 1.
MERCATOR'S CHART.

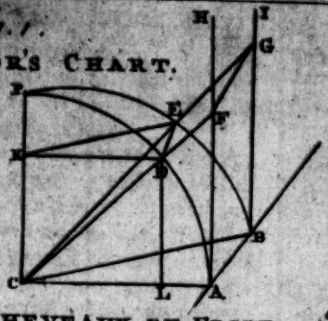


Fig. 2.
CHECKY.

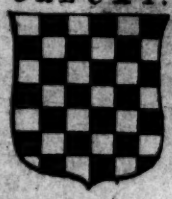


Fig. 3. CHEVEAUX *DE FRIZE.*

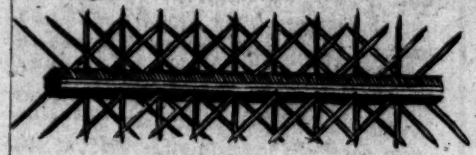


Fig. 4. CHEVRETTE.

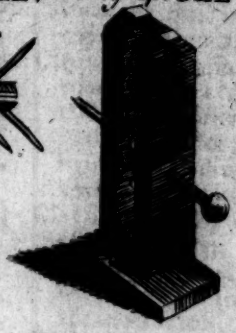


Fig. 5.
CHEVRON.



Fig. 6.
CHIEF.

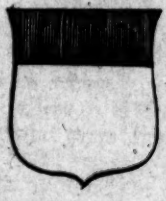


Fig. 8. The CHUB.



Fig. 7. CHORD.

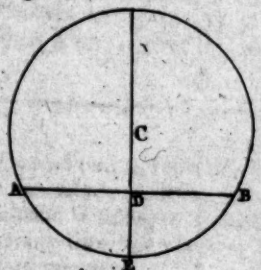


Fig. 9. CICHORIUM, *SUCCORY.*



Fig. 10.
CICINDELA.



Fig. 11. CICUTA, *HEMLOCK.*

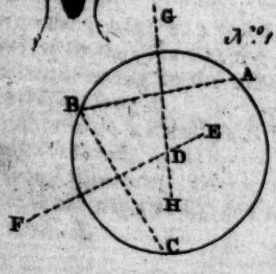


Fig. 12. CIMEX.

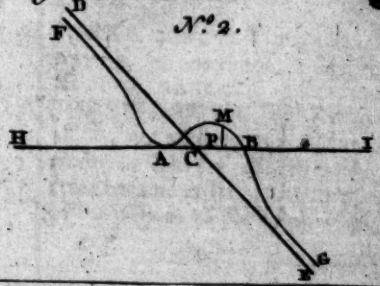


Fig. 13. CIRCLE.

N°. 1.



N°. 2.

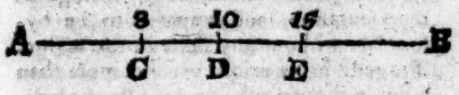


T. Jefferys sculp.

BRITISH MUSEUM

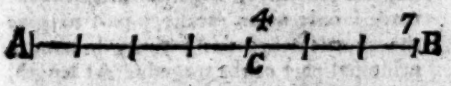
ratios 1:2, 2:3, and 4:5 to one fundamental, the ſeries becomes 30:24, 20:15, the fundamental is 30, and the ſections ſought are 24 the third greater, 20 the fifth, and 15 the octave.

2. To find ſeveral ſections of a line A, that from the leaſt part gradually to the whole, ſhall contain a given ſeries of intervals in any given order, *viz.* ſo as the leaſt to the next greater contain a third greater; that to the next greater, one fifth; and that to the whole, an octave. Reduce the three ratios 4:5, 2:3, and 1:2 to one ſeries; hence we have 8:10, 15:30. Divide the line into the number of parts of the greateſt extreme of the ſeries, *viz.* 30, and you have the ſections ſought of the points of diviſion, anſwering the ſeveral numbers of the ſeries, *viz.*



at the points C, D, and E; ſo as A C, to A D is a third, A D to A E a fifth, A D to A B an octave.

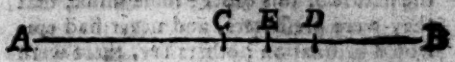
3. To divide a line A B into two parts, to contain betwixt them any interval, *e. g.* a fourth. Add together the numbers containing the ratio of the interval, for example 3:4, and divide the line into as many parts as the ſum, 7; the point of diviſion anſwering to any of the given numbers 4 or 7, gives the thing ſought.



4. To find two ſections of a line, which with the whole ſhall be in harmonical proportion with regard to their quantity. Take any three numbers in harmonical proportions, as 3—4—6, and divide the whole line into as many parts as the greateſt of theſe three numbers, 6; and at the points of diviſion anſwering the two other numbers, 3 and 4, you have the ſection ſought.

5. To find two ſections of a line, which together with the whole, ſhall be harmonical with reſpect to quantity or tune. Take any three numbers, concords with each other, *e. g.* 2:3 and 8, and divide the line by the greateſt: the points of diviſion anſwering to the other two, give the ſection ſought.

6. To divide a chord A B in the moſt ſimple manner, ſo as to exhibit all the original concords. Divide the line into two equal parts at C, and ſubdivide the part C B into equal parts at D, and again the part C D into equal parts at E.



Here A C : A B is an octave, A C : A D a fifth, A D : A B a fourth, A C : A E a third greater; A E : A D a third leſs; A E : E B, a ſixth greater; A E : A B a ſixth leſs.

CHORD is alſo uſed in muſic for the note or tone to be touched or ſounded: in this ſenſe the fifth is ſaid to conſiſt of five chords or ſounds.

CHORD, *chorda*, in anatomy, a little nerve, compoſed by a combination of ramuli of the fifth and ſeventh pairs, and extended in the manner of a chord, under the membrane of the drum of the ear. See the article TYMPANUM.

CHORDAPSUS, in medicine, a diſeaſe of the inteſtines, when to the touch they feel like ſtretched cords: it is the ſame with the iliac paſſion. See the article ILIAC PASSION.

CHORDEE, in medicine and ſurgery, a ſymptom attending a gonorrhœa, conſiſting in a violent pain under the frenum, and along the duct of the urethra, during the erection of the penis, which is incurvated downwards. Theſe erections are frequent and involuntary.

The chordee being a ſqueezing of the corroded urethra between the cavernous bodies, and the erection being excited by the ſtimulating matter of a gonorrhœa, the cure is to be performed by preſerving the urethra from being corroded, or by ſuppreſſing the erection, by which means the preſſure of the urethra will be prevented. The firſt may be effected by mild diuretics, ſoftening emulſions, and cooling injections; but the laſt can only be performed by thoſe means that give the moſt ſudden check to the ſwelling of the penis, ſuch as immerſion in cold water.

It has been found by experience, that rubbing a mercurial ointment into the part affected, and along the duct of the urethra, has done conſiderable ſervice in this complaint.

CHOREA SANCTI VITI, ST. VITUS'S DANCE, in medicine. See the article VITUS'S DANCE.

CHOREPISCOPUS, or COUNTRY-BISHOP, an aſſiſtant to a biſhop, firſt introduced into the church when the dioceſes became enlarged by the converſion of the pagans in the country and villages

at a diſtance from the mother-church. There are different opinions concerning the nature of this order: ſome think, that they were preſbyters, and never had epiſcopal ordination; others ſay, there were two claſſes of them, ſome that had epiſcopal ordination, and others that were ſimple preſbyters; and a third party imagine they were properly what we now call biſhops in partibus.

CHOREPISCOPUS is alſo the name of a dignity in ſome cathedrals in Germany, ſignifying the ſame with chori-epiſcopus, or biſhop of the choir. The firſt chanter in the church of Cologn is called chori-epiſcopus.

CHOREUS, in antient poetry, the ſame with trochæus, or trochee. See the article TROCHEE.

CHORGES, or GORGES, a town of Dauphiny, in France, about ſix miles eaſt of Gap: eaſt longitude 6°, and north latitude 44° 36′.

CHORIAMBUS, in antient poetry, a foot conſiſting of four ſyllables, whereof the firſt and laſt are long, and the two middle ones are ſhort; or, which is the ſame thing, it is made up of a trochæus and iambus: ſuch is the word nōbĭlĭtās.

CHORION, in anatomy, the exterior membrane which inveſts the fœtus in the uterus; it is thick, ſpungy, villoſe, and furniſhed with a vaſt apparatus of blood-veſſels. It is contiguous to the uterus, and is ſeparable into two membranes or parts.

CHORIST, or CHORISTER, one who ſings in the choir. See the article CHOIR.

CHOROBATA, or CHOROBATES, a kind of water-level among the antients, of the figure of the letter T, according to Vitruvius's deſcription. See LEVEL.

CHOROGRAPHY, the art of making a map of ſome country or province.

Chorography differs from geography, as the deſcription of a particular country does from that of the whole earth; and from topography, as the deſcription of a country differs from that of a town or diſtrict. See the articles GEOGRAPHY and TOPOGRAPHY.

CHOROIDES, in anatomy, an epithet of ſeveral membranes, which on account of the multitude of their blood-veſſels reſemble the chorion. See CHORION.

Choroides denotes the coat of the eye placed immediately under the ſclerotica, the inferior lamella of which is called tunica ruyſchiana; it is very full of veſſels, and coloured black.

Mr. Le Cat, in his deſcription of the parts of the eye, maintains Marriot's opinion of the choroid coat, and not the retina, being the immediate organ of viſion. The retina, according to him, is to the choroid, what the epidermis is to the ſkin.

Choroides is uſed for a portion of the pia mater. See the article PIA MATER.

Plexus CHOROIDES is a convolution of the membranes of the brain, conſiſting of an aſſemblage of veins and arteries.

CHORO-FAVORITO, in the italian muſic, a chorus in which are employed the beſt voices and inſtruments, to ſing the recitativos, play the ritornellos, &c. It is otherwiſe called the little chorus, or choro recitante.

CHORO-SPEZZATO, in the italian muſic, a compoſition of two, three, or four choruſſes. See the next article.

CHORUS, in dramatic poetry, one or more perſons preſent on the ſtage during the repreſentation, and ſuppoſed to be byſtanders without any ſhare in the action.

Tragedy in its origin was no more than a ſingle chorus, who trod the ſtage alone, and without any actors, ſinging dithyrambics or hymns in honour of Bacchus. Theſpis, to relieve the chorus, added an actor, who rehearſed the adventures of ſome of their heroes; and Æſchylus, finding a ſingle perſon too dry an entertainment, added a ſecond, at the ſame time reducing the ſinging of the chorus, to make more room for the recitation. But when once tragedy began to be formed, the recitative, which at firſt was intended only as an acceſſory part to give the chorus a breathing time, became a principal part of the tragedy. At length, however, the chorus became inſerted and incorporated into the action; ſometimes it was to ſpeak, and then their chief, whom they called coryphæus, ſpoke in behalf of the reſt: the ſinging was performed by the whole company; ſo that when the coryphæus ſtruck into a ſong, the chorus immediately joined him.

The chorus ſometimes alſo joined the actors in the courſe of the repreſentation, with their plaints and lamentations on account of any unhappy accidents that befel them: but the proper function, and that for which it ſeemed chiefly retained, was to ſhew the intervals of the acts: while the actors were behind the ſcenes, the chorus engaged the ſpectators; their ſongs uſually turned on what was exhibited, and were not to contain any thing but what was ſuited to the ſubject, and had a natural connection with it; ſo that the chorus concurred with the actors for ad-

advancing the action. In the modern tragedies the chorus is laid aſide, and the fiddles ſupply its place. Mr. Dacier looks on this retrenchment as of ill conſequence, and thinks it robs tragedy of a great part of its luſtre; he therefore judges it neceſſary to re-eſtabliſh it, not only on account of the regularity of the piece, but alſo to correct, by prudent and virtuous reflections, any extravagances that might fall from the mouths of the actors, when under any violent paſſion.

Mr. Dacier obſerved alſo, that there was a chorus, or grex, in the antient comedy; but this is ſuppreſſed in the new comedy, becauſe it was uſed to reprove vices by attacking particular perſons; as the chorus of the tragedy was laid aſide to give the greater probability to thoſe kind of intrigues which require ſecrecy.

To give the CHORUS, among the Greeks, was to purchaſe a dramatic piece of the poet, and defray the expences of repreſentation. See the article CHORAGUS.

CHORUS, in muſic, is when, at certain periods of a ſong, the whole company are to join the ſinger in repeating certain couplets, or verſes.

The word *chorus* is often placed in italian muſic, inſtead of *tutti*, or *da capella*, which mean the grand chorus. When after *chorus* we met with 1°, or *primo*, we muſt underſtand that it is to be played in the firſt chorus; if 2°, III°, or *ſecondo*, in the ſecond; and, conſequently, that the compoſition is for eight voices or different parts.

CHOSAIR, a town of Egypt, ſituated on the coaſt of the Red-ſea.

CHOSE, in the common-law, is uſed with various epithets: as,

CHOSE *in action*, is an incorporeal thing, and only a right, as an annuity, bond, covenant, *&c.* and generally all cauſes of ſuit, for any duty or wrong, are accounted choſes in action.

Choſes in action may be alſo called choſes in ſuſpence, as having no real exiſtence, and not being properly in our poſſeſſion.

CHOSE LOCAL is any thing that is annexed to a place, ſuch as a mill, *&c.*

CHOSE TRANSITORY, ſomething moveable, and which may be taken away, or carried from place to place.

CHOTZIM, a frontier town of Moldavia, on the confines of Poland, ſituated on the river Neiſter, and ſubject to the Turks: eaſt long. 27°, and north latit. 48°.

CHOUAN, in commerce, the levant name for the ſeed of a ſpecies of ſantolina, known among us by that of carmine-ſeed, from its being uſed in the preparation of that drug. See CARMINE.

CHOUGH, or CORNISH CHOUGH, in ornithology, a ſpecies of corvus. See the article CORVUS.

CHREMNITZ, or CHREMNITS, the principal of the mine-towns in upper Hungary, ſituated about ſixty-eight miles north eaſt of Preſburg, and ſubject to the houſe of Auſtria: eaſt longitude 19°, and north latitude 48° 45'.

CHREMPS, in ichthyology, a ſpecies of ſparus, with the ſecond ray of the belly-fins terminating in a kind of briſtle.

CHRISM, χρισμα, oil conſecrated by the biſhop, and uſed in the romiſh and greek churches in the adminiſtration of baptiſm, confirmation, ordination, and extreme unction.

It is obſerved, that there are two kinds of chriſm, the one prepared of oil and balſam, uſed in baptiſm, confirmation, and ordination; the other of oil alone, conſecrated by the biſhop, uſed antiently for the catechumens, and ſtill in extreme unction. The chriſm is prepared on Holy-thurſday with a world of ceremony: in Spain it was antiently the cuſtom for the biſhop to take one third of a ſol for the chriſm diſtributed to each church, on account of the balſam that entered its compoſition.

The action of impoſing the chriſm is called chriſmation: this the generality of the romiſh divines hold to be the next matter to the ſacrament of confirmation. The chriſmation in baptiſm is performed by the prieſt, that in confirmation by the biſhop.

CHRISM-PENCE, a tribute antiently paid to the biſhop by the pariſh clergy for their chriſm, conſecrated at Eaſter for the enſuing year; this was afterwards condemned as ſimonical.

CHRISOM, *chriſmale*, in antient cuſtoms, was the face-cloth, or piece of linen laid over the child's head when it was baptized; whence, in our bills of mortality, ſuch children as die in the month, are called chriſoms; the time between the birth and baptiſm, was alſo called chriſomus.

CHRIST, χριστος, an appellation uſually given to our Saviour, anſwering exactly to the hebrew meſſiah, and ſignifying one that is anointed. See MESSIAH.

It does not appear that Jeſus Chriſt ever received any external ſenſible unction, and therefore his anointing muſt be underſtood

derſtood in a figurative, ſpiritual ſenſe, to denote his deſignation or appointment to the office of a meſſiah.

The Jews uſed to give this appellation to their kings. Now as the holy unction was given to kings, prieſts, and prophets, ſo by deſcribing the promiſed ſaviour of the world under the name of anointed, it was ſufficiently evidenced that the qualities of king, prophet, and high prieſt, would all evidently meet in him.

Order of CHRIST, a military order, founded in 1320, by Dionyſius I. king of Portugal, to animate his nobles againſt the Moors.

The arms of this order are gules, a patriarchal croſs, charged with another croſs argent: they had their reſidence at firſt at Caſtromarin, afterwards they removed to the city of Thomar, as being nearer to the Moors of Andaluſia and Eſtremadura.

CHRIST is alſo the name of a military order in Livonia, inſtituted in 1205, by Albert biſhop of Riga. The end of this inſtitution was to defend the new chriſtians, who were converted every day in Livonia, but were perſecuted by the heathens. They wore on their cloaks a ſword with a croſs over it, whence they were alſo denominated brothers of the ſword.

CHRIST-CHURCH, a borough-town of Hampſhire, thirty miles ſouth-weſt of Wincheſter, near the ſea-coaſt; weſt long. 2°, north lat. 50° 40′.

It ſends two members to parliament.

CHRIST-THORN, in botany, a name given to the paliurus, a ſpecies of rhamnus. See the article RHAMNUS.

CHRISTENING, denotes the ſame with baptiſm. See the article BAPTISM.

CHRISTIAN, in a general ſenſe, ſomething belonging to Chriſt. See CHRIST.

CHRISTIAN CHURCH. See CHURCH.

CHRISTIAN COURT, *chriſtianitatis curia*, the eccleſiaſtical or biſhop's court, in contradiſtinction to the civil courts, which are called the king's courts, *curiæ domini regis*. See the article BISHOP'S-COURT.

Moſt CHRISTIAN *king*, *rex chriſtianiſſimus*, one of the titles of the king of France.

The french antiquaries trace the origin of this appellation up to Gregory the great, who writing a letter to Charles Martel, occaſionally gave him that title, which his ſucceſſors have ſince retained.

CHRISTIAN NAME, that given at baptiſm. See the article NAME.

CHRISTIAN RELIGION, that inſtituted by Jeſus Chriſt.

As the chriſtian religion hath the pureſt and moſt abſtracted, the higheſt and moſt rational ſpiritual notions, ſo has it been moſt ſubject to differences of opinions, and diſtractions of conſcience; the ſeveral ſects whereof are taken notice of under their proper heads.

If we conſider the chriſtian religion with regard to its principles, it cannot be denied but they are very obſcure, and difficult to be underſtood, and its myſteries are above the reach of human comprehenſion. The obſcurity of them is no doubt owing, in a great meaſure, to the ſubtilties introduced by ſeveral philoſophers, who became proſelytes to chriſtianity in the firſt ages of the church, and who afterwards becoming doctors, endeavoured to explain the myſteries of the chriſtian religion by arguments borrowed from the platonic and other pagan ſyſtems of philoſophy. Their ſucceſſors likewiſe, by their laboured explanations, added new obſcurities to thoſe which they found before; and the human paſſions inſenſibly blending with theſe ſyſtems, nothing more was wanting to render the chriſtian religion an impenetrable myſtery. To this, no doubt, is owing the origin of that number of ſects and hereſies which have ſprung up in the church, each of which lays claim to a primitive purity of doctrine, the characteriſtic of divine inſpiration, a right of ſuperiority, and a perfect knowledge of the way to heaven; and there is not one which, indirectly at leaſt, can forbear damning the reſt who diſſent from it.

The excellency of its morals, is a demonſtration of the divine original of the chriſtian religion. It conſiſts not in idle philoſophical ſpeculations, or perpetual grimace and affectation, but in a ſteady practice of the duties it requires, without the leaſt view of recompence from men: it neither ſeeks their admiration, nor attempts to dazzle their eyes and deceive them: there is no religion which excites man more to the love and practice of virtue, and hatred of vice, or that preſcribes greater rewards for the one, or puniſhments for the other.

The chriſtian religion, in regard to the practice of it, conſiſts in the moſt exact imitation, that poſſibly can be conceived, of the infinite perfections of the ſupreme being: from hence we may derive that ſolid virtue, that power which it gives us to ſubdue our paſſions, and that ſatiſ-

tisfaction which we receive from the obſervance of thoſe laws to the utmoſt of our abilities, which God has preſcribed to mankind.

The characters of chriſtianity are perfectly conformable to the attributes of the divine majeſty. The moral part never indulges the paſſions: it has no other view than the preſervation and happineſs of mankind; nor have the moſt inveterate enemies of the chriſtian faith ever invented any thing but what was much inferior to it, both in practice and ſpeculation.

CHRISTIANS, thoſe who profeſs to believe and practice the chriſtian religion, and are baptized in the name of Jeſus Chriſt.

When chriſtianity was firſt planted in the world, thoſe who embraced it were known among themſelves by the names of diſciples, believers, elect, ſaints and brethren: nor did they aſſume the name of chriſtians till the year 43 at Antioch, where St. Paul and Barnabas jointly preached the chriſtian religion. The primitive chriſtians were known by ſeveral denominations. Epiphanius ſays they were ſtiled Jeſſeans, either from Jeſſe, the father of David, or, what is more probable, from Jeſus, whoſe diſciples they were. Euſebius ſays that they were called *therapeutæ*, i. e. worſhippers of the true God, or ſpiritual phyſicians: and becauſe the chriſtian life took its original from the waters of baptiſm, the chriſtians were wont to pleaſe themſelves with the name *piſciculi*, i. e. fiſhes. Sometimes they ſtiled themſelves *gnoſtics*, i. e. men of underſtanding and knowledge; which name being afterwards abuſed by a perverſe ſort of heretics, they added the title of chriſtian to it, and gave themſelves the name of chriſtian-gnoſtics.

The chriſtians had alſo many names of reproach caſt upon them by their enemies, ſuch as nazarens, galileans, greeks, impoſtors, atheiſts, &c. which laſt name was common, upon account of their deriding the worſhip of the heathen gods.

CHRISTIANS *of St. John*, a ſect of chriſtians very numerous in Balſara, and the neighbouring towns: they formerly inhabited along the river Jordan, where St. John baptized, and it was from thence they had their name. They hold an anniverſary feaſt of five days, during which they all go to the biſhop, who baptizes them with the baptiſm of St. John. Their baptiſm is alſo performed on rivers, and that only on Sundays; they have no notion of the third perſon in the trinity, nor have they any canonical book, but abundance full of charms, &c. Their biſhoprics deſcend by inheritance, as our eſtates do, though they have the ceremony of an election.

CHRISTIANS *of St. Thomas*, a ſort of chriſtians in a peninſula of India, on this ſide of the gulph: they inhabit chiefly at Cranganor, and the neighbouring country: theſe admit of no images, and receive only the croſs, to which they pay a great veneration: they affirm that the ſouls of the ſaints cannot ſee God till after the day of judgment: they acknowledge but three ſacraments, *viz.* baptiſm, orders, and the euchariſt: they make no uſe of holy oils in the adminiſtration of baptiſm, but after the ceremony anoint the infant with an unction compoſed of oil and walnuts, without any benediction. In the euchariſt, they conſecrate with little cakes made of oil and ſalt, and inſtead of wine, make uſe of water in which raiſins have been infuſed.

CHRISTIANA, a town of Norway, in the province of Aggerhuys, ſituated on a bay of the ſea, 100 miles north of Gottenburg; eaſt long. 10° 15′, north lat. 59° 30′.

CHRISTIANOPLE, a port-town of Sweden, ſituated on the Baltic ſea, in the territory of Bleking, and province of ſouth Gothland, about thirteen miles north-eaſt of Carelſcroon: eaſt long. 15° 40′, north lat. 57°.

CHRISTIANSTADT, a town of Sweden, ſituated on the river Helles, in the territory of Bleking, and province of ſouth Gothland, forty-five miles weſt of Carelſcroon; eaſt long. 14° 40′, north lat. 56° 30′.

CHRISTMAS, a feſtival of the chriſtian church, obſerved on the 25th of December, in memory of the nativity of Jeſus Chriſt.

Whether this feſtival was always obſerved on the 25th of December, is a matter of doubt. Dr. Cave is of opinion, that it was firſt kept by the eaſtern church in January, and confounded with the epiphany, till, receiving better information from the weſtern churches, they changed it to that day. St. Chryſoſtom affirms, that it was not above ten years ſince chriſtmas began to be celebrated in the church of Antioch upon that day: Clemens Alexandrinus reckons from the birth of Chriſt to the death of Commodus, exactly 194 years, one month, and thirteen

thirteen days; which time, being taken according to the Egyptian account, and reduced to the Julian or Gregorian ſtile, makes the birth of Chriſt fall on the 25th or 26th of December: yet notwithſtanding this, the ſame father tells us, that there were ſome who, more curiouſly ſearching after the year and day of Chriſt's nativity, affixed the latter to the 25th of the month *pachon*. Now in that year in which Chriſt was born, the month *pachon* commenced the 20th of April, ſo that according to this computation, Chriſt was born on the 16th of May. Hence we may ſee how little certainty there is in this matter, ſince ſo ſoon after the event, the learned were divided in opinion concerning it. As to the antiquity of this feſtival, the firſt footſteps we find of it were in the ſecond century about the time of the emperor Commodus.

CHRISTMAS-ROSE, in botany, a name ſometimes given to a ſpecies of black hellebore. See the article HELLEBORE.

CHRISTOLYTI, in church-hiſtory, a ſect of chriſtian heretics, who maintained that Chriſt deſcended into hell body and ſoul, and that he left both there, aſcending into heaven with his divinity alone.

CHRISTOMACHI, an appellation given to all heretics who deny Chriſt's divinity, or maintain heterodox opinions concerning his incarnation.

CHRISTOPHER HERB, *chriſtophoriana*, in botany. See CHRISTOPHORIANA.

CHRISTOPHERS, or St. CHRISTOPHERS, one of the Caribbee-iſlands, to which Columbus gave his chriſtian name; weſt long. 62°, north lat. 17° 30′.

It is about twenty miles long, and ſeven broad; and has a high mountain in the middle, from whence ſome rivulets run down. Its produce is chiefly ſugar, cotton, ginger, and indigo. It is a britiſh colony, and lies about ſixty miles weſt of Antego.

CHRISTOPHORIANA, CHRISTOPHER-HERB, in botany, a genus of the polyandria-monogynia claſs of plants, called by Linnæus actæa; the flower of which is roſaceous, conſiſting of four petals: the fruit is a roundiſh, oval, unilocular berry, containing a number of ſemi-circular ſeeds, diſpoſed in a double row, with their ſtraight ſides towards each other.

CHROASTACES, in natural-hiſtory, a genus of pellucid gems, comprehending all thoſe of variable colours, as viewed in different lights; of which kind are the opal and the aſteria, or oculus cati. See the articles OPAL and ASTERIA.

CHROMA, in muſic, a note or character of time, uſually termed a quaver. See the articles CHARACTER and QUAVER.

Chroma is alſo a graceful way of ſinging, or playing with quavers and trilloes.

CROMATIC, in the antient muſic, the ſecond of the three kinds into which the conſonant intervals were ſubdivided into their concinous parts. The other two kinds are enharmonic and diatonic. See the article ENHARMONIC, &c.

The chromatic abounds in ſemitones: it had its name by reaſon the Greeks marked it with the character of colour, which they call χρωμα; or as P. Parran ſays, becauſe it is the medium between the other two, as colour is between black and white; or becauſe the chromatic kind varies, and embelliſhes the diatonic by its ſemitones, which have the ſame effects in muſic, as the variety of colours have in painting.

The degrees or elements of the chromatic genus, are the two ſemitones and triemitanium. Ariſtoxenus divides the chromatic genus into three ſpecies, the *molle*, *hemiolion*, and *tonicum*. Ptolemy into *molle*, or *antiquum*, and *intenſum*. The *molle* expreſſes a progreſſion by ſmall intervals, the *intenſum* by greater. The Spartans baniſhed it their city, becauſe of its ſoftneſs.

Mr. Malcolm obſerves, that we are at a loſs to know what uſe the antients could make of theſe diviſions and ſub-diviſions into genera and ſpecies. All acknowledge the diatonic to be the true melody: the others ſeem only numerous irregularities, calculated to pleaſe the fancy by their novelty and oddneſs; and are beſides ſo difficult, that few, if any, are ſaid to have practiſed them accurately.

Notwithſtanding this cenſure of Malcolm, it is plain that the accidental flats and ſharps which belong to the chromatic genus, are the cauſe of that vaſt variety of airs to be found in the modern muſic.

CHROMATIC, in painting, a term uſed to ſignify the colouring, which makes the third part in the art of painting.

CHROMIS, in ichthyology, a name uſed for two very different kinds of fiſh, *viz.* a ſpecies of ſparus called alſo *chremps*, and the ſciæna with the upper jaw longeſt, and otherwiſe called *umbra*. See the articles SPARUS and SCIÆNA.

CHRONIC, or CHRONICAL, among phyſicians,

ſicians, an appellation given to diſeaſes that continue a long time, in contradiſtinction to thoſe that ſoon terminate, and are called acute.

If health conſiſts in a free and uninterrupted circulation of the vital juices through the veſſels, and a diſeaſe is an interruption of this circulation, we may conceive that an acute diſtemper ariſes, when many and extenſive obſtructions occupy a great number of the veſſels all of a ſudden; for then the uſual quantity of blood is impelled through a ſmaller ſpace, and returns ſooner to the heart: in conſequence of this, the contractions of the heart are more frequent, the velocity of the circulating juices is greater, the reciprocal action between the ſolids and fluids is increaſed, and of courſe the heat of the body.

But when obſtructions are formed by degrees, and by little at a time, however extenſive they may become ultimately, no ſuch ſudden alteration is induced; but the vital powers, perhaps by diſcharging out of the body a portion of the ſuperfluous juices, find a way of preſerving the equilibrium betwixt the ſolids and fluids, and of adapting the circulating fluids to the capacity of the pervious veſſels, without raiſing a degree of fever ſufficient to impart the name of acute to the diſorder. Chronical diſeaſes then may be ſaid to be produced in the body by ſome peccancy in the juices, either contracted inſenſibly and by degrees, or elſe left by ſome acute diſtemper ill cured.

CHRONICLE, χρονικον, in matters of literature, a ſpecies or kind of hiſtory, diſpoſed according to the order of time, and agreeing in moſt reſpects with annals. See the article ANNALS.

The word chronicle is now become obſolete, being ſeldom uſed except in ſpeaking of the old engliſh hiſtories, as Stow's chronicle, Holinſhead's chronicle, &c.

Books of CHRONICLES, in the canon of ſcripture, two ſacred books, called by the Greeks *paralipomena*, παραλειπόμενα, that is, remains, additions, or ſupplements, as containing many circumſtances omitted in the other hiſtorical books.

In effect, the paralipomena, or chronicles, are an abridgment of ſacred hiſtory to the return of the Jews from the babyloniſh captivity. The firſt book traces the genealogies of the Iſraelites from Adam, deſcribes the death of king Saul, and gives a brief but accurate account of king David's reign. The ſecond, as faithfully traces the progreſs of the kingdom of Juda, its various revolutions, its period under king Zedekiah, and the reſtoration of the Jews by Cyrus.

CHRONOGRAM, χρονογραμμα, a ſpecies of falſe writ, conſiſting in this, that a certain date or epocha is expreſſed by numeral letters of one or more verſes; ſuch is that which makes the motto of a medal ſtruck by Guſtavus Adolphus, in 1632:

ChrIſtVs DVX, ergo trIVMphVs.

Such alſo are the two following verſes, made on the duke of Weymar on taking Briſac, in 1638.

InVICto fortIs CeCIDIt BræIsæIs AChILLI,
IVngItVr & tanto DIgna pVeLLa VIro.

CHRONOLOGY, χρονολογια, the ſcience or doctrine of time, in ſo far as it regards hiſtory, whether civil or eccleſiaſtical.

The buſineſs of chronology, is to aſcertain and adjuſt the various epochas, æræ, and other periods mentioned in hiſtory; ſo that the revolutions of empires and kingdoms, and other remarkable events, may be truly ſtated. See the articles ÆRA and EPOCHA.

It alſo takes a view of the various faſti, calendars, and methods of computing time practiſed by different nations; compares them together, and ſettles ſuch order and harmony among them, that the exact time, in which any remarkable event happened, may be certainly known. It is to chronology, as Mr. Locke well obſerves, that hiſtory owes its uſe and beauty; as being, without it, a mere chaos, a jumble of facts confuſedly heaped together, and conſequently capable of affording neither pleaſure nor inſtruction. See ALMANAC and CALENDAR.

To chronology alſo belongs the conſideration of the leſſer diviſions of time, as hour, day, week, month, year, cycle, &c. See the articles HOUR, DAY, WEEK, &c.

Sir Iſaac Newton's aſtronomical principles of CHRONOLOGY. — This illuſtrious author, in order to ſettle the grand epocha of the argonautic expedition, which he makes the baſis of his chronology, makes uſe of the following aſtronomical principles.

He obſerves that Eudoxus, in his deſcription of the ſphere of the antients, placed the ſolſtices and equinoxes in the middle of the conſtellations Aries, Cancer, Chelæ, and Capricorn: and alſo that this ſphere or globe was firſt made by Muſæus, and the aſteriſms delineated upon it by Chiron,

two

two of the Argonauts. Now it is well known, that by the precession of the equinoxes the ſtars go back 50″ *per annum*. And ſince, at the end of the year 1689, the equinoctial colure paſſing through the middle point, between the firſt and laſt ſtar of Aries, did then cut the ecliptic in ♈ 6° 44′, it is evident, that the equinox had then gone back 36° 44′; therefore, as 50″ is to one year, ſo is 36° 44′ to 2645 years, which is the time ſince the argonautic expedition to the beginning of the year 1690; that is 955 years before Chriſt is the æra of the argonautic expedition.

But our great author is more particular and ſubtile in this affair. He finds the mean place of the colure of the equinoxes and ſolſtices, by conſidering the ſeveral ſtars they paſſed thro' among other conſtellations as follows, according to Eudoxus. In the back of Aries is a ſtar of the ſixth magnitude, marked γ by Bayer; in the end of the year 1689, its longitude was ♈ 9° 38′ 45″; and the equinoctial colure paſſing through, according to Eudoxus, cuts the ecliptic in ♈ 6° 58′ 57″.

In the head of Cetus are two ſtars of the fourth magnitude, called ν and ξ by Bayer. Eudoxus's colure, paſſing in the middle betwixt them, cuts the ecliptic in ♈ 6°. 58′. 51″, at the end of the year 1689.

In the extreme flexure of Eridanus there was formerly a ſtar of the fourth magnitude (of late it is referred to the breaſt of Cetus.) It is the only ſtar in Eridanus, through which the colure can paſs; its longitude was at the end of the year 1689 ♈ 25° 22′ 10″, and the colure of the equinox paſſing through it cuts the ecliptic in ♈ 7° 12′ 40″.

In the head of Perſeus, rightly delineated, is a ſtar of the fourth magnitude, called τ by Bayer; its longitude was ♈ 23° 25′ 30″, at the end of the year 1689; and the colure paſſing through it cuts the ecliptic in ♈ 6° 18′ 57″. Alſo in the right-hand of Perſeus is a ſtar of the 4th magnitude, whoſe longitude at the end of the year 1689 was ♈ 24° 25′ 27″, and the equinoctial colure paſſing through it cuts the ecliptic in ♈ 4° 56′ 40″.

Now the ſum of all theſe five places of the colure, *viz.*	♈	6°	58′	57″
	♈	6	58	51
	♈	7	12	40
	♈	6	18	57
	♈	4	56	40
Is =	1	2	26	05

The fifth part of which is = ♈ 6° 29′ 13″, which is therefore the mean place in which the colure did, in the end of the year 1689, cut the ecliptic.

After a like manner he determines the mean place of the ſolſticial ſummer colure, to be ♑ 6° 28′ 46″, which, as it is juſt 90° from the other, ſhews it to be rightly deduced. The equinoxes having then departed 1° 6° 29′ from the cardinal points of Chiron, ſhews that 2628 years have elapſed ſince that time, which is more correct than the former number, though leſs by only 17 years. See PRECESSION.

By ſome other methods of a like nature, he alſo ſhews the æra of the Argonauts ought to be placed in that age of the world; and having fixed this moſt antient epocha, he makes his computation, with reference thereto, in the future part of his book.

As to the authors who have written on this ſcience, they are very numerous: among the moderns are Petavius, Voſſius, Uſher, Sir Iſaac Newton, *&c.* and among the antients, Julius Africanus, Euſebius, *&c.* There is alſo an excellent treatiſe of chronology by the learned Strauchius, tranſlated into engliſh by Mr. Sault, F. R. S. and an uſeful compend by Mr. Wells.

CHRONOMETER, in general, denotes any inſtrument, or machine, uſed in meaſuring time: ſuch are dials, clocks, watches, *&c.*

The term chronometer, however, is generally uſed in a more limited ſenſe, for a kind of clock ſo contrived as to meaſure a ſmall portion of time with great exactneſs, even to the ſixteenth part of a ſecond: of ſuch a one there is a deſcription in Deſaguliers's experimental philoſophy, invented by the late ingenious Mr. George Graham; which muſt be allowed to be of great uſe for meaſuring ſmall portions of time in aſtronomical obſervations, the time of the fall of bodies, the velocity of running waters, *&c.* But long ſpaces of time cannot be meaſured by it with ſufficient exactneſs, unleſs its pendulum be made to vibrate in a cycloid; becauſe, otherwiſe, it is liable to err conſiderably, as all clocks are which have ſhort pendulums that ſwing in large arches of a circle.

CHRONOSCOPE, denotes much the ſame with chronometer. See the preceding article.

CHROSTASIMA, in natural hiſtory, a genus of pellucid gems, comprehending

all thoſe which appear of one ſimple and permanent colour in all lights: ſuch are the diamond, carbuncle, ruby, garnet, amethyſt, ſapphire, beryl, emerald, and the topaz. See the articles DIAMOND, CARBUNCLE, &c.

CHRYSAETUS, or CHRYSAETOS, in ornithology, a name given to the eagle with a yellow cera or membrane, covering the baſe of the beak.

CHRYSALIS, in natural hiſtory, a ſtate of reſt and ſeeming inſenſibility which butterflies, moths, and ſeveral other kinds of inſects, muſt paſs through before they arrive at their winged or moſt perfect ſtate. See the article BUTTERFLY.

The firſt ſtate of theſe animals is in the caterpillar or reptile form; then they paſs into the chryſalis-ſtate, wherein they remain, immoveably fixed to one ſpot, and ſurrounded with a caſe or covering, which is generally of a conical figure; and, laſtly, after ſpending the uſual time in this middle ſtate, they throw off the external caſe wherein they lay impriſoned, and appear in their moſt perfect and winged form of butterflies, or flies. See CATERPILLAR.

Through the whole courſe of this tranſformation, the animal remains the ſame, only ſurrounded with different coverings: in the caterpillar-form, it is a kind of fœtus or embryo, wrapped up in ſeveral coats, the limbs of which can only be diſcovered by the aſſiſtance of the microſcope: in the chryſalis or nymph-ſtate, it acquires a farther degree of maturity, and then the limbs, wings, &c. become perfectly diſtinct; and, at length, it diſengages itſelf, and becomes an inhabitant of the air, adorned with a peculiar kind of plumage: in this laſt ſtate the two ſexes copulate, and the female lays her eggs, to be afterwards hatched into caterpillars, and to paſs through the like changes with the parent inſect.

CHRYSANTHEMUM, in botany, a genus of plants belonging to the ſyngeneſia-polygamia-ſuperflua claſs, the compound flower of which is radiated, the proper hermaphrodite one of a funnel-form, and the female ligulated, oblong, and tridentated. There is no pericarpium: the immutated cup contains, in the hermaphrodite, ſolitary, oblong, naked ſeeds; in the female, ſeeds very like thoſe of the hermaphrodite.

The flowers of this plant being bruiſed with cerate, are ſaid to diſcuſs a ſteatoma.

CHRYSOBALANUS, in botany, a genus of the polyandria-monogynia claſs of plants, the flower of which conſiſts of five ovated, plain, patent petals; the fruit is an ovated large berry, with one cell, containing an ovated, brittle, wrinkled kernel, with five furrows.

CHRYSOCOLLA, in natural hiſtory, a ſpecies of green ochre. See OCHRE.

CHRYSOCOMA, GOLDYLOCKS, in botany, a genus of plants, belonging to the ſyngeneſia-polygamia-æqualis claſs of plants, the compound flower of which is tubulous, the proper one of a funnel-form, with a quinquifid limb. There is no pericarpium, but the cup ſcarcely immutated, contains ſolitary, ovato-oblong, compreſſed ſeeds, crowned with a hairy down.

CHRYSOGONUM, MOTH-MULLEIN, in botany, a genus of plants belonging to the ſyngeneſia-polygamia-neceſſaria claſs; the univerſal flower is radiated; the proper hermaphrodite one is of a funnel-form quinquidentated and erect; the female one plain, oblong, truncated, and tridentated. There is no pericarpium: the immutated cup contains ſolitary, obverſo-cordated, quadrangular ſeeds in the female; the hermaphrodites prove abortive.

CHRYSOLITE, in natural hiſtory, a gem which the antients knew under the name of the topaz; and the true chryſolite of the antients, which had its name from its fine gold-yellow colour, is now univerſally called topaz by modern jewellers. See the article TOPAZ.

The chryſolite of our times is found of various ſizes: the moſt common, however, when pureſt and moſt valuable, is about the ſize of a nutmeg. It is of various figures, but never columnar, or in the figure of cryſtal. Sometimes it is found in roundiſh, irregular, pebble-like maſſes; at other times flat and oblong, but always with a rude ſurface. Its colour is a pale dead green, with an admixture of yellow; but the moſt uſual tinge is the colour of an unripe olive, with ſomewhat of a braſſy yellow. It is very ſoft in compariſon of the other gems, and its fineſt pieces do not exceed chryſtal in hardneſs. It is found in New Spain and in ſeveral parts of Sileſia and Bohemia. The american ones are greatly ſuperior to the european, but are uſually ſmall: the bohemian are very large; and few of them are of a clear colour, or free from flaws.

CHRYSOLITE PASTE, a kind of glaſs made in imitation of natural chryſolite, by mixing

mixing two ounces of prepared cryſtal, with ten ounes of red-lead, adding twelve grains of crocus martis made with vinegar; and then baking the whole for twenty-four hours, or longer, in a well luted crucible.

CHRYSOMELA, in zoology, a genus of inſects with bracelet-like antennæ, thickeſt towards the extremities; the body of an oval form, and the thorax rounded. Of this genus, which belongs to the order of coleoptera, there are different ſpecies, denominated from the trees on which they feed, as the chryſomela of tanzy, beech, alder, willow, &c. ſome being of one colour, ſome of another, with a tinge of gold-colour diffuſed through it.

CHRYSOPHYLLUM, STAR-APPLE, in botany, a genus of the pentandria-monogynia claſs of plants; the flower of which is monopetalous and campanulated, with the limb divided into ten ſegments, alternately roundiſh and patulous, and narrow and erect; the fruit is a ſubovated large berry with one cell, containing three oſſeous ſeeds.

CHRYSOPRASUS, or CHRYSOPRASIUS, the tenth of the precious ſtones, mentioned in the Revelations, as forming the foundation of the heavenly Jeruſalem.

The chryſopraſius is a ſpecies of praſius, of a pale but pure green colour, with an admixture of yellow. See PRASIUS.

CHRYSOPS, GOLDEN-EYE, in zoology, a ſpecies of hemerobius, ſo called from the colour of its eyes. See the article HEMEROBIUS.

CHRYSOSPLENIUM, GOLDEN-SAXIFRAGE, in botany, a genus of the octandria-digynia claſs of plants, without any flower-petals, unleſs the cup, which is coloured, be reckoned ſuch: the fruit is an unilocular, two-horned capſule, containing a number of very minute ſeeds.

CHRYSOPLYCIUS PULVIS, a powder mentioned by Helmont, which, he ſays, procures hardneſs to lead, and difficulty of liqueſaction to tin and mercury, but deprives iron of both theſe qualities.

CHRYSTAL, or CRYSTAL. See the article CRYSTAL.

CHRYSTALLINE and CHRYSTALLIZATION. See the articles CRYSTALLINE and CRYSTALLIZATION.

CHUB, or CHUBB, in ichthyology, the engliſh name of a ſpecies of cyprinus, with eleven rays in the pinna ani. See the article CYPRINUS.

When full grown, it is about a foot in length. See plate XLI. fig. 3.

CHUPMESSAHITES, a ſect of mahometans, who believe that Jeſus Chriſt was God, and the redeemer of the world; an opinion which they maintain with ſuch courage, as to chooſe to die rather than deny it.

This ſect is ſaid to be very numerous, though few dare make profeſſion of it openly. The word ſignifies as much as protectors of the chriſtians.

CHURCH, has different ſignifications, according to the different ſubjects to which it is applied. 1. It is underſtood of the collective body of chriſtians, or all thoſe over the face of the whole earth who profeſs to believe in Chriſt, and acknowledge him to be the ſaviour of mankind. This is what the antient writers call the catholic or univerſal church. Sometimes the word church is conſidered in a more extenſive ſenſe, and divided into ſeveral branches, as the church militant, is the aſſembly of the faithful on earth; the church triumphant, that of the faithful already in glory, to which the papiſts add the church patient, which, according to their doctrines, is that of the faithful in purgatory.

2. Church is applied to any particular congregations of chriſtians, who at one time, and in one place, aſſociate together and concur in the participation of all the inſtitutions of Jeſus Chriſt, with their proper paſtors and miniſters. Thus we read of the church of Antioch, the church of Alexandria, the church of Theſſalonica, and the like.

3. Church denotes a particular ſect of chriſtians diſtinguiſhed by particular doctrines and ceremonies. In this ſenſe we ſpeak of the romiſh church, the greek church, the reformed church, the church of England, &c.

The latin or weſtern church, comprehends all the churches of Italy, France, Spain, Africa, the north, and all other countries whither the Romans carried their language. Great Britain, part of the Netherlands, of Germany, and of the North, have been ſeparated from hence ever ſince the time of Henry VIII. and conſtitute what we call the reformed church, and what the romaniſts call the weſtern ſchiſm.

The greek or eaſtern church, comprehends the churches of all the countries antiently ſubject to the greek or eaſtern empire, and through which their language was carried; that is, all the ſpace extended from Greece to Meſopotamia and Perſia, and thence into Egypt. This church has been divided from the

roman,

roman, ever ſince the time of the emperor Phocas.

The gallican church, denotes the church of France, under the government and direction of their reſpective biſhops and paſtors. This church has always enjoyed certain franchiſes and immunities, not as grants from popes, but as derived to her from her firſt original, and which ſhe has taken care never to relinquiſh. Theſe liberties depend upon two maxims; the firſt, that the pope has no authority, or right to command or order any thing either in general or in particular, in which the temporalities and civil rights of the kingdom are concerned; the ſecond, that notwithſtanding the pope's ſupremacy is owned in caſes purely ſpiritual, yet, in France, his power is limited and regulated by the decrees and canons of antient councils received in that realm.

4. The word church is uſed to ſignify the body of eccleſiaſtics, or the clergy, in contradiſtinction to the laity. See CLERGY.

5. Church is uſed for the place where a particular congregation or ſociety of chriſtians aſſemble for the celebration of divine ſervice. In this ſenſe, churches are variouſly denominated, according to the rank, degree, diſcipline, &c. as metropolitan church, patriarchal church, cathedral church, parochial church, collegiate church, &c. See METROPOLIS, PATRIARCH, &c.

As to the form and faſhion of the primitive churches, it was for the moſt part oblong; which figure, we learn from the conſtitutions, was intended to repreſent a ſhip, the common ſymbol of the church of Chriſt; and as to the ſeveral parts of which they conſiſted in thoſe early ages, it appears that at the entrance of them was the veſtibulum or porch, called alſo atrium and προναὸν, adorned with cloiſters, marble columns, and ciſterns of water, where the loweſt order of penitents ſtood begging the prayers of the faithful as they went in: that the church itſelf conſiſted of the narthex, where ſtood the catechumens, the energumeni, and the hearers, who were one order of penitents; of the ναὸς, or nave, where the faithful aſſembled for the celebration of divine ſervice; and of the λιβανὸν, or βῆμα, ſeparated from the reſt of the church by neat rails called cancelli. Into this part none were allowed to come, but thoſe in holy orders, the emperors excepted, who came up to the table to make their offerings, and then went back again. Within this diviſion was the communion-table, or altar.

As to the ornaments of the antient churches, they were either ἀνατιθέμενα, ſymbolical memorials or hieroglyphical repreſentations of the kindneſs which they had received, in imitation of the votive tablets of the gentiles; or they conſiſted of portions of ſcripture, written upon the walls. A very conſiderable ornament was beautifying the roofs with gilding and moſaic work. Sometimes they decked their churches with flowers and branches; but as to pictures, the uſe of them was not allowed for the firſt 300 years, being firſt introduced by Paulinus, biſhop of Nola, about the latter end of the fourth century.

CHURCH, with regard to architecture is defined by Daviler a large oblong edifice in form of a ſhip, with nave, choir, iſles, chapel, belfry, &c. See each of theſe under its proper head.

Simple CHURCH, that which has only a nave and choir.

CHURCH *with iſles*, that which has a row of porticos in form of vaulted galleries, with chapels in its circumference.

CHURCH *in a greek croſs*, that where the length of the traverſe part is equal to the length of the nave, ſo called becauſe moſt of the greek churches are built in this form.

CHURCH *in a latin croſs*, that where the nave is longer than the croſs part, as in moſt of the gothic churches.

CHURCH *in rotundo*, that whoſe plan is a perfect circle, in imitation of the pantheon at Rome.

CHURCH-GOVERNMENT, DISCIPLINE, &c. See the articles ECCLESIASTICAL, DISCIPLINE, &c.

CHURCH-REEVES, the ſame with churchwardens.

CHURCH-SCOT, ſignified cuſtomary oblations paid to a pariſh prieſt, from which the religious ſometimes purchaſed an exemption.

By the latin writers it was called *primitiæ ſeminum*, on account it was firſt a quantity of corn paid to the prieſt on St. Martin's day, as the firſt fruits of harveſt.

CHURCH STRETTON, a market-town of Shropſhire, about twelve miles ſouth of Shrewſbury; weſt longitude 2° 50′, north latitude 52° 35′.

CHURCH-THANE, the ſame with altar-thane. See the article ALTAR-THANE.

CHURCH-WARDENS, formerly called church-reeves, are officers choſen yearly, in Eaſter week, by the miniſter and pariſhioners of every pariſh, to look after the church, church-yard, church revenues, &c. alſo to obſerve the behaviour of the pariſhioners, in relation to ſuch miſdemeanors as appertain to the cenſure or juriſdiction of the eccleſiaſtical court.

They are to be choſen by the joint conſent of the miniſter and his pariſhioners, and, by cuſtom, the miniſter may chuſe one, and the pariſhioners another; or, if there be a cuſtom for it, the pariſhioners may elect both; though it is againſt the canon. They are ſworn into their office by the archdeacon; and if he refuſes to ſwear a church-warden, a mandamus may iſſue out to compel him: for as the church-wardens have a truſt repoſed in them by the pariſh, as temporal officers, the pariſhioners are the proper judges of their abilities to ſerve, and not the archdeacon who ſwears them.

The church-wardens are a corporation to ſue, and be ſued, for the goods of the church: they are to take care of the repairs of the church; and if they erect or add any thing new to the ſame, they muſt have the conſent of the pariſhioners, or veſtry; and if in the church, the licenſe of the ordinary: they have, with the conſent of the miniſter, the placing of the pariſhioners in the ſeats of the body of the church, appointing gallery-keepers, &c. reſerving to the ordinary a power to correct the ſame. In London, the church-wardens have this authority in themſelves; there alſo they are bound to fix fire-cocks, keep engines, &c. in their pariſhes, under the penalty of 10 l.

Beſides their ordinary power, the church-wardens have the care of the benefice during its vacancy: they are to join with the overſeers of the poor in making rates for their relief, ſetting up trades for employing them, placing out poor apprentices, ſettling poor perſons, &c. It is their duty to collect the charity-money upon briefs read in churches; they are to ſign the certificates of thoſe perſons who receive the ſacrament, to qualify them to bear offices, &c.

CHURCH-YARD, the ſame with coemetery. See the article COEMETERY.

CHURCHING *of women after child-birth*, an office in the liturgy, containing a thankſgiving to be uſed by women after being delivered from the great pain and peril of child-birth.

This practice, like many other chriſtian uſages, undoubtedly took its riſe from the jewiſh rite of purification enjoined by the law of Moſes.

In the greek church, the time of performing this office is limited to the fortieth day after delivery; but in the weſtern parts of Europe, no certain time is obſerved: the uſual time with us is a month after delivery, provided the woman be ſufficiently recovered. See the article CHRYSOM.

CHURLE, CEORLE, or CARL, in the time of the Saxons, ſignified a tenant at will, who held land of the thanes on condition of rent and ſervice. They were of two ſorts, one like our farmers that rented the out-land eſtates, the other which tilled and manured the demeſnes, and therefore called ploughmen.

CHURN-OWL, in ornithology, a name given to a ſpecies of ſwallow, otherwiſe called *caprimulgus*, or the goat-ſucker. See the article CAPRIMULGUS.

CHUSAN, or CHEUXAN, an iſland on the eaſtern coaſt of China, near the province of Chekiam; eaſt long. 124°, north lat. 30° 40′.

CHUSISTAN, a province in the ſouth-weſt part of Perſia, bounded by the gulph of Perſia on the ſouth, and by the province of Eyraca-Agem on the north.

CHUTON, or CHUTTON, a market-town of Somerſetſhire, about ſeven miles north-eaſt of Wells; weſt long. 2° 36′, north lat. 51° 25′.

CHYLE, in the animal œconomy, a milky fluid, ſecreted from the aliments by means of digeſtion.

The principles of the chyle ſeem to be ſulphureous, mucilaginous, ſaline, and aqueous. It is a kind of natural emulſion, both with regard to the colour, the ingredients, and the manner of preparation. There is this difference between the artificial and natural emulſion, that the latter is far more pure, and is prepared with much greater apparatus, not by the ſudden expreſſion of part of the liquid, but by a gentle and ſucceſſive percolation. The chyle is made ſooner or later, according to the difference of the temperaments, ſtrength, aliments and cuſtoms: therefore how many hours chylification requires, cannot be certainly determined.

When

When the chyle enters the villous ofcula of the lacteals, it is not a fluid extracted merely from the aliment and drink, but a mixture of ſeveral fluids; that is, the ſaliva and thinner mucus of the mouth, and the two fluids of the œſophagus, one proceeding from the villous membrane of the tube itſelf, the other from its glands. To theſe may be added the glutinous fluid of the ſtomach, the pancreatic juice, the fluid of peyer's glands, which are very numerous in the ſmall inteſtines. Hence the reaſon appears, why men may live upon bread and water, why the oriental nations uſe rice in the room of all kinds of pulſe; and why acids, ſpirituous liquors, ſaline things, and many vegetable juices, herbs, roots, acrid and aromatic ſubſtances, are the leaſt fit to generate chyle.

Some of the antients ſuppoſed the chyle was changed into blood in the liver; others of them in the heart: but the moderns, with more reaſon, take the change to be effected by the blood itſelf, in all the parts of the body. See the article BLOOD.

CHYLIFICATION, the formation of the chyle, or the act whereby the food is changed into chyle. See the articles FOOD and CHYLE.

Chylification commences by comminuting the aliment in the mouth, mixing it with ſaliva, and chewing it with the teeth; by theſe means the food is reduced into a kind of pulp, which, being received into the ſtomach, mixes with the juices thereof; and thus diluted, begins to ferment and putrify, and aſſuming a very different form from what it had before, grows either acid or rancid. Here it meets with a juice ſeparated from the blood by the glands of that part, whoſe excretory ducts open into the cavity of the ſtomach: by the commixture of theſe liquors, whether of ſaliva or the juice of the ſtomach, a proper menſtruum is compoſed, by which the parts of the aliment are ſtill more and more divided by its inſinuating into their pores, acquire ſtill a greater likeneſs to the animal fluids, and form what is called chyme. The ſtomach, by means of its muſcular fibres, contracting itſelf, does gradually diſcharge its contents by the pylorus into the duodenum; in which gut, after a ſmall ſemicircular deſcent, it meets with the pancreatic juice and bile; both which joining with it, renders ſome part of the aliment more fluid, by ſtill diſuniting the groſſer parts from the more pure, and here the chylifaction is made perfect.

The bile which abounds with lixivial ſalts, and is apt to entangle with the groſſer parts of the concocted aliment, ſtimulates the guts, and cleanſes their cavities of the mucous matter ſeparated from the blood by the glands of the guts, and lodged in their cavities; which not only moiſtens the inſide of the guts, but defends the mouth of the lacteal veſſels from being injured by alien bodies, which often paſs that way.

The contents of the inteſtines move ſtill on, by means of the periſtaltic motion of the guts; whilſt thoſe thinner parts, fitted to the pores of the lacteal veſſels, are abſorbed by them: the thicker move ſtill more ſlowly on, and by the many ſtops they continually meet with by the connivent valves, all the chyle or thin parts are at length entirely abſorbed; the remains being merely excrementitious, are only fit to be protruded by ſtool.

In the paſſage thro' the ſmall inteſtines, the finer part of the maſs, which we call the chyle (as has been already obſerved) enters the orifices of the lacteal veſſels of the firſt kind, wherewith the whole meſentery is intermixed, which either alone, or together with the meſeraic veins, diſcharge themſelves into the glands, at the baſis of the meſentery.

Then the chyle is taken up by the lacteals of the ſecond kind, and is conveyed into glands between the two tendons of the diaphragm, called Pecquet's reſervatory; whence it is carried to the heart by the thoracic duct, and the ſubclavian vein: and here it firſt mixes with the blood, and in time becomes aſſimilated thereto.

CHYLOSIS, among phyſicians, the act of reducing the aliment in the ſtomach to chyle, being the ſame with chylification, See the article CHYLIFICATION.

It is frequently alſo called *concoctio prima*, or the firſt concoction.

CHYME, or CHYMUS, χυμος, in the common ſignification of the word, denotes every kind of humour which is inraſſated by concoction, under which notion it comprehends all the humours fit or unfit for preſerving and nouriſhing the body, whether good or bad. It frequently imports the fineſt part of the chyle, when ſeparated from the fæces, and contained in the lacteal and thoracic duct.

See

See the article CHYLIFICATION.

In Galen, it ſignifies the guſtatory faculty in animals.

CHYMISTRY, or CHEMISTRY. See the article CHEMISTRY.

CHYMOLOGI, an appellation given to ſuch naturaliſts as have employed their time in inveſtigating the properties of plants from their taſte and ſmell.

CHYMOSIS, in medicine, the art of making or preparing chyme. See the article CHYME.

According to ſome, chymoſis is the ſecond concoction made in the body, being a repeated preparation of the moſt impure and groſs part of the chyle, which being rejected by the lacteals, is imbibed by the meſeraics, and carried to the liver, to be there purified and ſubtilized afreſh.

CHYMOSIS is alſo a diſtortion of the eyelids, ariſing from an inflammation; alſo an inflammation of the cornea tunica in the eye.

CIBDELOPLACIA, in natural hiſtory, a genus of ſpars debaſed by a very large admixture of earth: they are opake, formed of thin cruſts, covering vegetables and other bodies, by way of incruſtations.

Of this genus we have the following ſpecies: 1. A greyiſh-white one, with a rough ſurface. 2. A whitiſh-brown one: both theſe are friable. 3. A hard, pale-brown kind, which is the oſtecolla of the ſhops. 4. The whitiſh-grey kind, with a ſmooth ſurface: this is the unicornu foſſile and ceratites of authors. 5. The whitiſh-brown, coralloide kind.

CIBDELOSTRACIA, in natural hiſtory, terrene ſpars, deſtitute of all brightneſs or tranſparence, formed into thin plates, and uſually found coating over the ſides of fiſſures, and other cavities of ſtone, with congeries of them of great extent, and of plain or botryoide ſurfaces.

Of theſe there are uſually reckoned ſeven kinds: the firſt is the hard, browniſh-white cibdeloſtracium, found in Germany: the ſecond is the hard, whitiſh cibdeloſtracium, with thin cruſts, and a ſmoother ſurface, found alſo in the Harts-foreſt in Germany: the third is the hard, pale-brown cibdeloſtracium, with numerous very thin cruſts, found in ſubterranean caverns in many parts of England, as well as Germany: the fourth is the white, light and friable cibdeloſtracium, found alſo in Germany, but very rarely in any part of England: the fifth is the light, hard, pale-brown cibdeloſtracium, with a ſmooth ſurface, found in almoſt all parts of the world: the ſixth is the whitiſh, friable, cruſtaceous cibdeloſtracium, with a rougher ſurface, frequent in Germany and England; and the ſeventh is the browniſh-white, friable cibdeloſtracium, with a duſty ſurface, found in ſeveral parts of Ireland, as well as Germany.

CIBOULS, in botany, the name of a ſpecies of onion. See ONION.

CICADA, the BAUM-CRICKET, in zoology, a genus of four-winged inſects, of the order of the hemiptera, the characters of which are theſe: the antennæ are very ſhort; the ſnout bent downwards; the wings are cruciated, or diſpoſed in the form of a croſs; the back is convex, and the thorax ſomewhat rounded. Of this genus there are a great many ſpecies, as the laternaria, ranatra, locuſtapulex, &c.

CICATRICULA, among natural hiſtorians, denotes a ſmall whitiſh ſpeck in the yolk of an egg, ſuppoſed to be the firſt rudiments of the future chick. See the article EGG.

CICATRISIVE, or CICATRIZANT MEDICINES. See the article CICATRIZANTS.

CICATRIX, in ſurgery, a little ſeam or elevation of callous fleſh riſing on the ſkin, and remaining there after the healing of a wound or ulcer. It is commonly called a ſcar.

In young infants theſe ſcars diminiſh much, and ſometimes vaniſh quite when they come to age, as may be ſeen in the pits of the ſmall-pox; and in growing, they are ſometimes obſerved to change their ſituation.

A ſurgeon in curing a wound, ought to be very induſtrious to procure an even cicatrix; for which purpoſe it will be proper to dry by degrees, and to harden the ſurface of the new fleſh, by the application of dry lint covered with a light bandage: but when this is not ſufficient, it may be proper to uſe ſome of the drying eſſences or native balſams, or drying powders; ſuch as tutia, lapis calaminaris, maſtiches or colophonium. Rectified ſpirits of wine, which is of an aſtringent drying virtue, is frequently uſed for this purpoſe with great advantage. See the article WOUND.

CICATRIZANTS, in pharmacy, medicines which aſſiſt nature to form a cicatrix. Such are arminian bole, powder of

of futty, diſiccativum rubrum, &c.

Cicatrizants are otherwiſe called eſcharotics, epulotics, incarnatives, agglutinants, &c.

CICER, the CHICH-PEA, in botany, a genus of the diadelphia-decandria claſs of plants, the flower of which is papilionaceous; the fruit is a turgid pod, of a rhomboid ſhape, containing two roundiſh ſeeds.

The ſeeds of this plant are accounted in ſome meaſure abſterſive, and for that reaſon are met with in diuretic compoſitions in the officinal medicines, but they are very ſeldom found in other preſcriptions. Chich-peaſe were the proviſion of the antient Hebrews when they took the field. They parched them, and ſo eat them; and at this day, in Egypt, it is uſual for thoſe who undertake a long journey, to lay in a good ſtock of chich-peaſe, parched in a frying-pan.

CICERONIANS, CICERONIANI, or CICERONIASTRI, epithets given by Muretus, Eraſmus, Nicholaus, Suſius, &c. to thoſe moderns who were ſo ridiculouſly fond of Cicero, as to reject every latin word as obſolete or impure, that could not be found in ſome one or other of his works.

CICHORIUM, SUCCORY, in botany, a genus of the ſyngeneſia-polygamia-æqualis claſs of plants, the compound flower of which is plain and uniform: the proper one, monopetalous, ligulated, truncated, and deeply quinquidentated; there is no pericarpium, but the cylindrical cup, connivent at the top, contains ſolitary compreſſed ſeeds with acute angles. See plate XLI. fig. 9.

This plant is regarded in all the ſhop-compoſitions, where it is concerned, as an hepatic. We ſeldom meet with it in extemporaneous preſcriptions, unleſs in a few medicated ales.

CICINDELA, in zoology, the ſame with the pyrolampis, or glow-worm, a genus of inſects, the antennæ of which are ſetaceous, and ſlender as a thread; the jaws are prominent and dentated; and the thorax is of a roundiſh but ſomewhat angulated figure. See plate XLI. fig. 10. Of this genus authors enumerate the following ſpecies. 1. The field or green glow-worm, with ten white ſpots on the exterior wings. 2. The black glow-worm, with ſix white ſpots on the exterior wings, common in woody places. 3. The braſſy glow-worm, with broad excavated ſpots on the wings, common about the banks of rivers. 4. The black glow-worm, with a reddiſh thorax; and ſeveral other ſpecies, diſtinguiſhed by the like peculiarities.

CICLA, in ichthyology, a ſmall fiſh with a yellow or gold-coloured iris, and a broad tail, not forked.

It is made a diſtinct genus, whereof there are two ſpecies. 1. The larger cicla, called turdus major, about a ſpan in length. 2. The leſſer cicla, or turdus minor, ſeldom exceeding a hand's breadth in length.

CICUTA, WATER-HEMLOCK, in botany, a genus of the pentandria-digynia claſs of plants, the univerſal flower of which is uniform; the proper one conſiſts of five oval, cordated, inflected, and almoſt equal petals, diſpoſed in the manner of a roſe; there is no pericarpium; the fruit is roundiſh, ſtriated, and diviſible into two parts; the ſeeds are two, ſubovated, convex and ſtriated on one ſide, and plain on the other. See plate XLI. fig. 11.

CICUTA is alſo Tournefort's name for the common hemlock or conium of Linnæus. See the article CONIUM.

CIDARIS, in antiquity, the mitre uſed by the jewiſh high prieſts. The Rabbins ſay, that the bonnet uſed by prieſts in general, was made of a piece of linen-cloth ſixteen yards long, which covered their heads like a helmet or a turbant; and they allow no other difference between the high prieſt's bonnet, and that of other prieſts, than this, that one is flatter and more in the form of a turbant; whereas that worn by ordinary prieſts, roſe ſomething more in a point. A plate of gold was an ornament peculiar to the high prieſt's mitre.

CIDARIS, in conchyliology, the name by which authors call the turban-ſhell, or centronia, of a roundiſh figure. See the article CENTRONIA.

CIDER, or CYDER. See the article CYDER.

CIFALU, or CEFALEDI, a port-town of Sicily, thirty-ſix miles eaſt of Palermo; eaſt longitude 13° 32′, north latitude 38° 30′.

CILIA, the EYE-LASHES, in anatomy, are certain rigid hairs ſituated on the arch or tarſus of the eye-lids, and bent in a very ſingular manner.

They are deſtined for keeping external bodies out of the eye, and for moderating the influx of light.

CILIARE, or LIGAMENTUM CILIARE, or

or CILIARIS PROCESSUS, in anatomy, a range of black fibres diſpoſed circularly, having their riſe in the inner part of the uvea, terminating in the prominent part of the chryſtalline humour of the eye, which they ſurround.

Mr. Mariotte denies the ligamentum ciliare to have any connection with the chryſtalline, or to ſerve for any purpoſes thereof; but Dr. Porterfield, in the medical eſſays of Edinburgh, thinks that it accommodates the chryſtalline to the diſtances of objects; from whence he accounts for the phænomena of viſion, as alſo of diſeaſes; as, 1. When the ciliare ligamentum becomes paralytic, no near object will appear diſtinct. 2. If this ligament ſhould be convulſed, no diſtant object will appear diſtinct. 3. If it ſhould be paralytic on one ſide, and ſound on the other, the chryſtalline muſt get an oblique ſituation, when we look at near objects; whence they will not appear diſtinct, unleſs the eye be turned aſide from the object. 4. When this ligament has become rigid and ſtiff, the chryſtalline will have but very little motion, when the limits of diſtinct viſion will be very narrow.

CILIARIS, in anatomy, the ſame with the orbicular muſcle of the eye. See the article ORBICULARIS.

CILIATED LEAF, among botanical writers, one ſurrounded all the way with parallel filaments, ſomewhat like the hairs of the eye-lids; whence its name.

CILICIUM, in hebrew antiquity, a ſort of habit made of coarſe ſtuff, formerly in uſe among the Jews in times of mourning and diſtreſs. It is the ſame with what the ſeptuagint and hebrew verſions call ſack-cloth. St. John, in the Revelations, plainly ſhews that theſe ſack-cloths, or, as they are otherwiſe called, hair-cloths, were of a black colour.

CILLEY, the capital of a territory of the ſame name in Stiria, and the circle of Auſtria, in Germany; eaſt longitude 15° 35′, north latitude 46° 35′.

CIMA, or SIMA, in architecture, the ſame with cymatium or ogee. See the article OGEE.

CIMELIANTHUS, in natural hiſtory, the name of a ſpecies of oculus beli, with a yellow pupil in the middle. See the article OCULUS BELI.

CIMEX, BUG, in zoology, a genus of four-winged flies, of the order of the hemiptera, the characters of which are theſe; the roſtrum or ſnout is inflected, or bent towards the breaſt; the wings are cruciated; the legs are formed for running; the back is plain, and the thorax marginated. See plate XLI. fig. 12.

Of this genus there are a great many ſpecies, ſome of which are roundiſh, and others of an oblong body. 1. The green and yellow bug. 2. The common houſe bug. 3. The blackiſh bug. 4. The grey bug. 5. The reddiſh bug. 6. The black bug, with white wings. 7. The oblong, reddiſh-brown bug. 8. The oblong, green bug. 9. The oblong bug, variegated with red and black. 10. The oblong, grey bug. 11. The oblong, black bug. 12. The oblong, greeniſh white bug; and a great many other ſpecies, diſtinguiſhed by the like peculiarities.

For a method of deſtroying the houſe-bug, ſee the article BUG.

CIMOLIA TERRA, in natural hiſtory, a ſpecies of white marle, which is ponderous and friable, and makes a conſiderable effervеſcence with aqua-fortis.

The antients preſcribed this earth with ſucceſs, it is ſaid, in St. Anthony's fire, inflammations, and the like external ailments, to be applied by way of a cataplaſm; and made the ſame uſe of it for cleaning cloaths, as we now do of fuller's-earth. See the article FULLER'S-EARTH.

CIMOLIA ALBA, a name given to the hard, heavy, white clay, whereof tobacco-pipes are made.

Its diſtinguiſhing characters are, that it is a denſe, compact, heavy earth, of a dull white colour, and very cloſe texture; it will not eaſily break between the fingers, and ſlightly ſtains the ſkin in handling. It adheres firmly to the tongue; melts very ſlowly in the mouth, and is not readily diffuſible in water. It is found in many places. That of the iſle of Wight is much eſteemed for its colour. We have vaſt plenty of it alſo near Pole in Dorſetſhire, and near Weddenſbury in Staffordſhire.

CINALOA, a province of Mexico, in North America, lying on the Pacific ocean, oppoſite to the ſouth end of California.

CINCA, a river of Spain, which, ariſing in the Pyrenean mountains, and running ſouth-eaſt through Arragon, falls into the river Ebro.

CINCHONA, in botany, a genus of the pentandria-

pentandria-monogynia class of plants, the flower of which is monopetalous and infundibuliform: the fruit is a roundish bilocular capsule, crowned with a cup, and opening into two parts from the base to the apex, containing several oblong, compressed, marginated seeds.

This is the tree which produces the quinquina, or peruvian bark. See the article QUINQUINA.

CINCLUS, in ornithology, a species of tringa, with the tip of the beak punctatated, and the back greenish. See the article TRINGA.

CINCTURE, or CEINTURE, in architecture, a ring, list, or ollo at the top and bottom of the shaft of a column, separating the shaft at one end from the base, and at the other from the capital. See the articles COLUMN and SHAFT.

That at bottom is particularly called apophyge, as if the pillar took its rise from it; and that at top colarin, colar, or collier, and sometimes annulus. See the articles APOPHYGE and COLARIN.

The cincture is supposed to be in imitation of the girts or ferrils, which were used by the antients to strengthen and preserve the primitive wooden columns.

CINERARIA, in ornithology, the name by which Linnæus calls the grey motacilla. See the article MOTACILLA.

CINERES, ASHES, in natural history, &c. See the article ASHES.

CINERES CLAVELLATI, among chemists, the ashes of tartar, or lees of wine.

From the great quantity of sea-salt so frequently found in cineres clavellati, Dr. Degner suspects that the sea-salt is designedly mixed with these ashes, because it is cheaper.

CINERITIOUS, an appellation given to different substances, on account of their resembling ashes, either in colour or consistence: hence it is, that the cortical part of the brain, has sometimes got this epithet. See the article BRAIN.

CINGULUM SAPIENTIÆ, a name given by the inventor Rulandus to a quick-silver girdle. See GIRDLE.

CINNA, in botany, a genus of the monandria digynia class of plants; the corolla consists of a bivalve compressed linear glume, there is no pericarpium; the seed, which is single and cylindric, is included in the cup, which is also a bivalve compressed linear glume carinated, acuminated, and containing one only flower.

CINNABAR, in natural history, is either native or factitious. The native cinnabar is an ore of quick-silver, moderately compact, very heavy, and of an elegant, striated red colour. In this ore the quick-silver is blended in different proportions with sulphur. It is so rich an ore, as to be no other than mercury impregnated with a small quantity of sulphur, just enough to reduce it to that state, being commonly more than six parts of mercury to one of sulphur; and even the poorest cinnabar yields one half mercury: it is of a very bright, glittering appearance, when fresh broken; and is usually found lodged in a bluish, indurated clay, though sometimes in a greenish talcy stone. For the method of separating mercury from cinnabar, see the article MERCURY.

Factitious CINNABAR, a mixture of mercury and sulphur sublimed, and thus reduced into a fine red glebe. The best is of a high colour, and full of fibres, like needles.

The receipt for making it, according to the late college dispensatory, is as follows. Take of purified quick-silver, twenty-five ounces; of sulphur, seven ounces; melt the sulphur, and stir the quick-silver into it while fluid; if it take fire, let it be immediately extinguished, by covering it with another vessel. When cold, let it be rubbed into a fine powder. Let this powder be put into a subliming vessel, and setting it over a gentle fire, raise it by degrees till the whole is sublimed into a red, striated, heavy mass, which perfectly resembles native cinnabar. This, as well as the native cinnabar, is excellent in epilepsies, and in all complaints of the head and nerves. But the factitious is rather to be preferred, as it doth not excite nauseas, vomitings, and other disorders which arise from vitriolic and perhaps arsenical particles blended by nature among some of the masses of the native mineral.

Cinnabar is likewise used by painters as a colour, and is rendered more beautiful, by grinding it with gum-water and a little saffron.

There is likewise a blue cinnabar, made by mixing two parts of sulphur with three of quick-silver and one of sal armoniac.

CINNABAR *of antimony*, a preparation of mercury, sulphur, and antimony, made by sublimation, said to be a good diaphoretic and alterative. See the article ANTIMONY.

CINNAMON-TREE, *cinnamomum*, in botany, is only a species of the laurus, according to Linnæus, distinguished by

its oblong, ovated, trinervous, and plain leaves. See the article LAURUS.

The bark of this tree is the cinnamon of the ſhops, which to be good, ought to be of a reddiſh colour, not ſimply brown, and above all things, of an acrid and agreeable taſte. The greateſt deceits that are practiſed in the ſale of cinnamon, are the ſelling ſuch as has already had its eſſential oil diſtilled from it, and been dried again, and the impoſing the *caſſia lignea* in its place. The firſt of theſe cheats is diſcovered by the want of pungency in the cinnamon; the ſecond, by this, that the caſſia, when held a little time in the mouth, becomes mucilaginous, which is not the caſe with the true cinnamon.

No cinnamon can be imported into Britain, except from the Eaſt-Indies. That which comes from thence pays a duty of 3 s. $4\frac{86}{100}$ d. a pound, and draws back on exportation, 3 s. $0\frac{29\frac{1}{3}}{100}$ d. at the rate of 6 s. 8 d.

Cinnamon is an aſtringent in the *primæ viæ*, but in the more remote ſeats of action, it operates as an aperient and alexipharmic. It ſtops diarrhœas, promotes the menſes, and haſtens delivery: it ſtrengthens the viſcera, aſſiſts concoction, diſpels flatulencies, and is a very preſent cardiac. It affords an oil which will ſink in water, and is of great eſteem and much preſcribed in extemporaneous practice. As it is much adulterated on account of its dearneſs, the beſt way to know it is by dropping it upon ſugar, and then diſſolving it in ſmall ſpirit. This oil has been made genuine in England from the common cinnamon of the ſhops, ſo as to exceed that brought from Holland.

CINNAMON-WATER is made by diſtilling the bark firſt infuſed in ſpirit of wine, brandy, or white-wine.

Clove-CINNAMON is the bark of a tree growing in Brazil, which is often ſubſtituted for real cloves.

White CINNAMON, called alſo winter's bark, is the bark of a tree frequent in the iſlands of St. Domingo, Guadaloupe, &c. of a ſharp biting taſte like pepper. Some uſe it inſtead of nutmeg; and in medicine it is eſteemed a ſtomachic and antiſcorbutic. See the article WINTER'S BARK.

CINOLOA, or CINALOA, the capital of the province of Cinaloa, in North America, about thirty miles eaſt of the bay of California; weſt long. 113°, north lat. 25°. See the article CINALOA.

CINQUEFOIL, *quinquefolium*, in botany, the ſame with the potentilla of Linnæus. See the article POTENTILLA.

Cinquefoil-roots are eſteemed drying, aſtringent, and antiſebrific; and accordingly have been preſcribed with ſucceſs in agues, and fluxes of all kinds.

CINQUE-PORTS, *quinque portus*, five havens that lie on the eaſt part of England towards France, ſo called, by way of eminence, on account of their ſuperior importance; having been thought by our kings to merit a particular regard for their preſervation againſt invaſion. Hence they have a particular policy, and are governed by a keeper, with the title of lord-warden of the Cinque-ports.

They have various privileges granted them, as a peculiar juriſdiction; their warden having not only the authority of an admiral among them, but ſending out writs in his own name. Their members of parliament are called barons of the Cinque-ports. Camden ſays, that William the Conqueror firſt appointed a warden of the Cinque-ports; but king John firſt granted them their privileges, and that upon condition they ſhould provide a certain number of ſhips at their own charge for forty days, as often as he had occaſion for them in the wars, he being then under a neceſſity of having a navy to recover Normandy; which ſervice the barons of the Cinque-ports performed.

The five ports are Haſtings, Romney, Hythe, Dover, and Sandwich; to which we may add Winchelſea, Rye, and Seaford. There are alſo ſeveral other towns adjoining, which have the privileges of the ports. Theſe Cinque-ports have certain franchiſes, and the king's writs do not run there. The conſtable of Dover-caſtle is lord-warden of the Cinque-ports; and there are ſeveral courts within the Cinque-ports; one before the lord-warden, others within the ports themſelves, before the mayor and jurats, and another, called Curia quinque portuum apud Shepway. There is likewiſe a court of Chancery in the Cinque-ports, to decide matters of equity, but no original writs iſſue thence.

CINQUE-PORT is alſo a particular kind of fiſhing-net much uſed in ſtanding water, ſo called on account of the five entrances into it.

CINTRA, a cape and mountain of Portugal, in the province of Eſtremadura, uſually called the rock of Liſbon, ſituated on the north ſide of the entrance of the river

river Tagus: west longitude 10° 15′, north latitude 39°.

CINYRA, or CINNOR, in jewiſh antiquity, generally tranſlated cithara, lyra, &c. a muſical inſtrument uſed before the flood, and invented by Jubah the ſon of Lamech. It was on the cinyra that David played before Saul; and this was the inſtrument, which the captive Levites hung upon the willows of Babylon. It was made of wood, and was played on in the temple of Jeruſalem. Joſephus ſays, that the cinyra of the temple had ten ſtrings, and was touched with the bow. See the article CITHARA.

CION, or CYON, among gardeners, denotes a young ſprig, or ſprout of a tree.

CION, in anatomy, a name ſometimes uſed for the uvula. See the article UVULA.

CIPHER, or CYPHER, one of the arabic characters, or figures, uſed in computation, formed thus o.

A cypher of itſelf ſignifies nothing; but when placed after other characters, in whole numbers, it augments their value ten times; and when placed before other characters in decimal arithmetic, it leſſens the value in each figure in the ſame proportion.

CIPHER is alſo a kind of enigmatic character, compoſed of ſeveral letters interwoven, which are generally the initial letters of the perſon's names for whom the ciphers are intended.

Theſe are frequently uſed on ſeals, coaches, and other moveables. Merchants likewiſe, inſtead of arms, bear a cipher, or the initial letters of their names interwoven about a croſs, of which we have many inſtances on old tombs.

CIPHER denotes likewiſe certain ſecret characters diſguiſed and varied, uſed in writing letters that contain ſome ſecret, not to be underſtood but by thoſe between whom the cipher is agreed on.

De la Guilletiere, in a book intitled *Antient and modern Lacedæmon*, pretends that the antient Spartans were the inventors of the art of writing in cipher, making their ſcytala the firſt ſketch of that myſterious art. See SCYTALA LACONICA. Polybius relates, that Æneas Tacticus, two thouſand years ago, collected together twenty different manners of writing ſo as not to be underſtood by any but thoſe in the ſecret; part of which were invented by himſelf, and part uſed before his time.

There are ſeveral kinds of ciphers, according to lord Bacon; as the ſimple, thoſe mixed with non-ſignificants, thoſe conſiſting of two kinds of characters, wheel-ciphers, key-ciphers, word-ciphers, &c. They ought all to have theſe three properties, 1. They ſhould be eaſy to write and read. 2. They ſhould be truſty and undecipherable. And, 3. Clear of ſuſpicion.

There is a new way of eluding the examination of a cipher, *viz.* to have two alphabets, the one of ſignificant, and the other of non-ſignificant letters; and folding up two writings together, the one containing the ſecret, while the other is ſuch as the writer might probably ſend without danger: in caſe of a ſtrict examination, the bearer is to produce the non-ſignificant alphabet for the true, and the true for the non-ſignificant; by which means the examiner would fall upon the outward writing, and, finding it probable, ſuſpect nothing of the inner. No doubt the art of ciphering is capable of great improvement. It is ſaid that king Charles I. had a cipher conſiſting only of a ſtraight line differently inclined: and there are ways of ciphering by the mere punctuation of a letter, whilſt the words of a letter ſhall be non-ſignificants, or ſenſe that leaves no room for ſuſpicion. Thoſe who deſire a fuller explanation of ciphering, may conſult Bacon, where they will find a cipher of his invention; Biſhop Wilkin's Secret and ſwift Meſſenger; and Mr. Falconer's Cryptomenyſis patefacta.

CIPHER *with a ſingle key*, that in which the ſame character is conſtantly uſed to expreſs the ſame word or letter.

CIPHER *with a double key*, that in which the alphabet or key is changed in each line, or in each word; and wherein are inſerted many characters of no ſignificancy, to perplex the meaning.

CIPHERING, or CYPHERING, a term ſometimes uſed for the practical part of arithmetic. See ARITHMETIC.

CIPPUS, in antiquity, a low column, with an inſcription, erected on the high roads, or other places, to ſhew the way to travellers, to ſerve as a boundary, to mark the grave of a deceaſed perſon, &c.

Thoſe erected in the high-ways to mark the miles, were called milliary columns.

CIPPUS is alſo the name of a wooden inſtrument with which criminals and ſlaves were puniſhed, being a clog or ſtocks for the feet.

CIRCÆA, ENCHANTERS NIGHTSHADE, in botany, a genus of the diandria-monogynia

pogynia claſs of plants, the flower of which conſiſts of cordated petals, equal in height, and ſpread open; the fruit is an oval or pear-like bilocular capſule, containing ſingle oblong ſeeds.

CIRCASSIA, a country ſituated between 40° and 50° eaſt longitude, and between 45° and 50° north latitude.

It is bounded by Ruſſia on the north, by Aſtracan and the Caſpian ſea on the eaſt, by Georgia and Dagiſtan on the ſouth, and by the river Don and the Palus Meotis on the weſt.

The circaſſian Tartars form a kind of republic, but ſometimes put themſelves under the protection of Perſia, and ſometimes of Ruſſia, or the Turks. They live moſtly in tents, removing from place to place for the benefit of paſturage; and are chiefly remarkable for the beauty of their children, the ſeraglios of Turky and Perſia being uſually ſupplied with boys and young virgins from this and the neighbouring country of Georgia.

CIRCENSIAN GAMES, *circenſes ludi*, a general term, under which was comprehended all combats exhibited in the roman circus, in imitation of the olympic games in Greece. Moſt of the feaſts of the Romans were accompanied with circenſian games; and the magiſtrates, and other officers of the republic, frequently preſented the people with them, in order to procure their favour. The grand games were held for five days, commencing on the fifteenth of September. There were ſix kinds of games exhibited: the firſt was wreſtling, and fighting with ſwords, with ſtaves, and with pikes; the ſecond was racing; the third, *ſaltatio*, leaping; and fourth, *diſci*, quoits, arrows, and ceſtus; all which were on foot; the fifth was horſe-courſing: the ſixth, courſes of chariots, whether with two horſes or with four.

CIRCLE, *circulus*, in geometry, a plane figure comprehended by a ſingle curve line, called its circumference, to which right lines, or radii, drawn from a point in the middle, called the center, are equal to each other.

The area of a circle is found by multiplying the circumference by the fourth part of the diameter; or half the circumference by half the diameter: for every circle may be conceived to be a polygon of an infinite number of ſides, and the ſemidiameter muſt be equal to the perpendicular of ſuch a polygon, and the circumference of the circle equal to the periphery of the polygon: therefore half the circumference multiplied by half the diameter, gives the area of the circle.

Circles, and ſimilar figures inſcribed in them, are always as the ſquares of the diameters; ſo that they are in a duplicate ratio of their diameters, and conſequently of their radii.

A circle is equal to a triangle, the baſe of which is equal to the periphery, and its altitude to its radius: circles therefore are in a ratio compounded of the peripheries and the radii.

To find the proportion of the diameter of a CIRCLE *to its circumference.* Find, by continual biſection, the ſides of the inſcribed polygon, till you arrive at a ſide ſubtending any arch, howſoever ſmall; this found, find likewiſe the ſide of a ſimilar circumſcribed polygon; multiply each by the number of the ſides of the polygon, by which you will have the perimeter of each polygon. The ratio of the diameter to the periphery of the circle will be greater than that of the ſame diameter to the perimeter of the circumſcribed polygon, but leſs than that of the inſcribed polygon. The difference of the two being known, the ratio of the diameter to the periphery is eaſily had in numbers very nearly, though not juſtly true. Thus Archimedes fixed the proportion at 7 to 22.

Wolfius finds it as 100000000000000000 to 314159265358979321; and the learned Mr. Machin has carried it to one hundred places, as follows: if the diameter of a circle be 1, the circumference will be 3,14159, 26535, 89793, 23846, 26433, 83279, 50288, 41971, 69399, 37510, 58209, 74944, 59230, 78164, 05286, 20899, 86280, 34825, 34211, 70679 of the ſame parts. But the ratios generally uſed in practice are that of Archimedes, and the following; as 106 to 333, as 113 to 355, as 1702 to 5347, as 1815 to 5702, or as 1 to 3.14159.

To deſcribe a CIRCLE *through three given points*, ABC (plate XLI. fig. 13. N°. 1.) *not in a right line.* Draw two right lines from A to B, and from B to C; then divide theſe two right lines into two equal parts, by the perpendiculars GH and FE: the point of their interſection D will be the center of the circle required. Hence it follows, 1. That three points in the periphery or arch of any circle being given, the center may be found, and the arch perfected. 2. If three points of any periphery coincide with three points

points of another, the whole peripheries agree, and the circles are equal. 3. Every triangle may be inſcribed in a circle.

The quadrature of the CIRCLE, or the manner of making a ſquare, whoſe ſurface is perfectly and geometrically equal to that of a circle, is a problem that has employed the geometricians of all ages. See the article QUADRATURE.

Many maintain it to be impoſſible; Des Cartes, in particular, inſiſts on it, that a right line and a circle being of different natures, there can be no ſtrict proportion between them: and in effect we are at a loſs for the juſt proportion betweeen the diameter and circumference of a circle.

Archimedes is the perſon who has come neareſt the truth: all the reſt have made paralogiſms. Charles V. offered a reward of one hundred thouſand crowns to the perſon who ſhould ſolve this celebrated problem; and the ſtates of Holland have propoſed a reward for the ſame purpoſe.

CIRCLE *of the higher kind*, an expreſſion uſed by Wolfius, and ſome others, to denote, for the moſt part, a curve expreſſed by the equation $y^m = ax^{m-1} - x^m$, which indeed will be an oval when m is an even number; but when m is an odd number, the curve will have two infinite legs, as ſuppoſe $m = 3$, then the curve FAMG (plate XLI. fig. 13, n° 2.) expreſſed by the equation $y^3 = ax^2 - x^3$, where AP $= x$, PM $= y$, and AB $= a$ will be one of Sir Iſaac Newton's defective hyperbolas, being, according to him, the thirty-ſeventh ſpecies, whoſe aſymptote is the right line DE at half right angles with the abſciſs HI.

CIRCLES *of the ſphere* are ſuch as cut the mundane ſphere, and have their periphery either on its moveable ſurface, or in another immoveable ſurface: the firſt revolve with its diurnal motion, as the meridians, &c. the latter do not revolve, as the equator, the ecliptic, &c.

If a ſphere be cut in any manner, the plane of the ſection will be a circle, whoſe center is in ſome diameter of the ſphere. Hence the diameter of a circle paſſing through the center, being equal to that of the circle which generated the ſphere; and that of a circle which does not paſs through the center, being only equal to ſome chord of the generating circle; the diameter being the greateſt of all chords, there ariſes another diviſion of the circles of a ſphere, into great and leſs.

Great CIRCLE *of the ſphere*, that which having its center in the center of the ſphere, divides it into two equal hemiſpheres; ſuch are the equator, ecliptic, horizon, the colures, and the azimuths, &c. See EQUATOR, ECLIPTIC, &c.

Leſſer CIRCLE *of the ſphere*, that which having its center in the axis of the ſphere, divides it into two unequal parts: theſe are uſually denominated from the great circles to which they are parallel, as parallels of the equator.

CIRCLES *of altitude*. See ALMUCANTARS.

Diurnal CIRCLES are immoveable circles, ſuppoſed to be deſcribed by the ſeveral ſtars and other points of the heavens, in their diurnal rotation round the earth; or rather, in the rotation of the earth round its axis.

CIRCLE *of curvature*, a circle, the curvature of which is equal to that of a certain curve at a given point.

CIRCLE *equant*, in the old aſtronomy, a circle deſcribed on the center of the equant, the principal uſe of which is to find the variation of the firſt inequality.

CIRCLES *of excurſion* are parallel to the ecliptic, and uſually fixed at ten degrees from it, that the excurſions of the planets towards the poles of the ecliptic may be included within them.

All theſe circles of the ſphere are conceived to fall perpendicularly on the ſurface of the globe, and ſo to trace out circles perfectly ſimilar to them. Thus the terreſtrial equator is a line preciſely under the equinoctial in the heavens, and ſo of the reſt.

CIRCLES *of latitude*, or *ſecondaries of the ecliptic*, are great circles perpendicular to the plane of the ecliptic, paſſing through the poles of it, and through every ſtar and planet. They ſerve to meaſure the latitude of the ſtars, which is an arch of one of thoſe circles intercepted between the ſtar and the ecliptic.

CIRCLES *of longitude* are ſeveral leſſer circles parallel to the ecliptic, ſtill diminiſhing in proportion as they recede from it; on theſe the longitude of the ſtars is reckoned.

CIRCLES *of declination*, on the globe, are, with ſome writers, the meridians on which the declination or diſtance of any ſtar from the equinoctial is meaſured.

Horary CIRCLES, in dialling, are the lines which ſhew the hours on dials, though theſe be not drawn circular, but nearly ſtraight.

Horary CIRCLE, on the globe, a brazen circle fixed on every globe with an index, to

to ſhew how many hours, and conſequently how many degrees any place is eaſt or weſt of another.

CIRCLE *of perpetual apparition*, one of the leſſer circles, parallel to the equator, deſcribed by any point touching the northern point of the horizon, and carried about with the diurnal motion: all the ſtars included within this circle are always viſible above the horizon.

CIRCLE *of perpetual occultation*, another circle at a like diſtance from the equator, on the ſouth, containing all thoſe ſtars which never appear in our hemiſphere.

Polar CIRCLES are parallel to the equator, and at the ſame diſtance from the poles that the tropics are from the equator. See the articles ARCTIC and ANTARCTIC.

CIRCLES *of poſition* are circles paſſing thro' the common interſections of the horizon and meridian, and through any degree of the ecliptic, or the center of any ſtar, or other point in the heavens; and are uſed for finding out the ſituation or poſition of any ſtar. Theſe are called by aſtrologers, circles of the celeſtial houſes.

Arch of a CIRCLE,	See	ARCH.
Antarctic CIRCLE,		ANTARCTIC.
Arctic CIRCLE,		ARCTIC.
Axis of a CIRCLE,		AXIS.
Center of a CIRCLE,		CENTER.
Concentric CIRCLE,		CONCENTRIC.
Eccentric CIRCLE,		ECCENTRIC.
Fairy CIRCLE,		FAIRY.
Secondary CIRCLE,		SECONDARY.
Segment of a CIRCLE,		SEGMENT.

Vertical CIRCLES. See the articles VERTICAL and AZIMUTH.

CIRCLE, in logic, or *logiſtical* CIRCLE, is when the ſame terms are proved *in orbem* by the ſame terms; and the parts of the ſyllogiſm alternately by each other, both directly and indirectly. Thus the papiſts, who are famous at this falſe way of arguing, prove the ſcripture to be the word of God, by the infallible teſtimony of their church; and when they are called upon to ſhew the authority of their church, they pretend to prove it by the ſcripture.

There are two kinds of circles, the one material, the other formal: the formal is that in which two reciprocal ſyllogiſms beg the medium, which is the next cauſe of the greater extreme; if this is admitted, the ſame thing becomes both prior and poſterior, the cauſe and effect of itſelf, which is abſurd. The material circle, called alſo *regreſſus*, conſiſts of two ſyllogiſms, the former of which proves the cauſe by the effect, and the latter the effect by the cauſe.

CIRCLE, *circulus*, among ſchoolmen, is underſtood of viciſſitudes of generation ariſing one out of another: thus, vapours ariſe from moiſt grounds, rain is formed of vapours, and rain again moiſtens the ground. It is a celebrated dogma of the ſcotiſts, that there is no circle in cauſes of the ſame order or kind.

CIRCLES *of the empire*, ſuch provinces and principalities of the empire as have a right to be preſent at diets. Maximilian I. divided the empire into ſix, and ſome years afterwards into ten circles. This laſt diviſion was confirmed by Charles V. The circles, as they ſtand in the Imperial Matricula, are as follows, Auſtria, Burgundy, the Lower Rhine, Bavaria, Upper Saxony, Franconia, Swabia, Upper Rhine, Weſtphalia, and the Lower Saxony.

CIRCOLO MEZZO, in the italian muſic, denotes a diminution of four quavers or ſemiquavers, which repreſent a ſemicircle, proceeding by conjoint degrees.

CIRCUIT, or CIRCUITY, in law, ſignifies a longer courſe of proceedings than is needful to recover the thing ſued for; in caſe a perſon grants a rent-charge of 10l. a-year out of his manor, and afterwards the grantee diſſeiſes the grantor, who thereupon brings an aſſiſe, and recovers the land, and 20l. damages; which being paid, the grantee brings his action for 10l. of the rent, due during the time of the diſſeiſm; this is termed circuity of action, becauſe as the grantor was to receive 20l. damages, and pay 10l. rent, he might only have received the 10l. for the damages, and the grantee might have retained the other 10l. for his rent, and by that means ſaved his action.

CIRCUIT alſo ſignifies the journey, or progreſs, which the judges take twice every year, through the ſeveral counties of England and Wales, to hold courts, and adminiſter juſtice, where reſource cannot be had to the king's courts at Weſtminſter; hence England is divided into ſix circuits, *viz.* The home circuit, Norfolk circuit, Midland circuit, Oxford circuit, Weſtern circuit, and Northern circuit.

In Wales there are but two circuits, North and South Wales; two judges are aſſigned by the king's commiſſion to every circuit.

In Scotland there are three circuits, *viz.* the

the Southern, Weſtern, and Northern, which are likewiſe made twice every year, *viz.* in ſpring and autumn.

CIRCULAR, in a general ſenſe, any thing that is deſcribed or moved in a round, as the circumference of a circle, or ſurface of a globe.

The circular form is of all others the beſt diſpoſed for motion, and the moſt capacious.

CIRCULAR LETTER, a letter directed to ſeveral perſons, who have the ſame intereſt in ſome common affair.

CIRCULAR LINES, in mathematics, ſuch ſtraight lines as are divided from the diviſions made in the arch of the limb, ſuch as ſines, tangents, ſecants, chords, *&c.* See the articles SINE and TANGENT.

CIRCULAR NUMBERS, called alſo ſpherical ones, according to ſome, are ſuch whoſe powers terminate in the roots themſelves.

Thus, for inſtance, 5 and 6, all whoſe powers do end in 5 and 6, as the ſquare of 5 is 25, the ſquare of 6 is 36, *&c.*

CIRCULAR SAILING is the method of ſailing by the arch of a great circle. See the article SAILING.

CIRCULAR VELOCITY, in the new aſtronomy, ſignifies the velocity of any planet, or revolving body, which is meaſured by the arch of a circle. See CIRCLE.

CIRCULATION, the act of moving round, or in a circle; thus we ſay, the circulation of the blood, the circulation of the ſap, of the ſpirits, *&c.*

CIRCULATION *of the blood*, the natural motion of the blood in a living animal, whereby that fluid is alternately carried from the heart to all parts of the body by the arteries, and returned from the ſame parts to the heart by the veins.

This motion is chiefly cauſed by the dilatation and contraction of the heart, and is the principle on which life depends; for when it ceaſes in any part, it dies; when it is diminiſhed, the operations are weak; and when it ceaſes totally, life is extinguiſhed. See the articles BLOOD, HEART, ARTERY, and VEIN.

All the veins diſcharge themſelves into the ventricles of the heart; from hence all the arteries ariſe; the blood expelled out of the right ventricle muſt be carried, through the pulmonary artery, into the lungs; from which it muſt be returned, by the pulmonary veins, to the left ventricle; from the left ventricle the blood, thus imported, is, by the conſtriction of that part, again expelled into the aorta, and by it diſtributed all over the reſt of the body, and thence is returned again to the right ventricle by the cava, which completes the circulation.

This circulation becomes actually viſible, with the aſſiſtance of a microſcope, eſpecially in fiſh, frogs, *&c.* wherein the inoſculation, or union of the extremities of the arteries with thoſe of the veins, together with the globules of the blood flowing from the one into the other, may be plainly ſeen, as repreſented in plate XLII. fig. 1.

The reaſons evincing the circulation of the blood, are as follow:

1. All the blood of a living animal, upon wounding any of the larger arteries, is evacuated in a little time, and that with a conſiderable force; whence it follows, that the blood has a paſſage from every part of the animal body into every artery; and if the whole maſs of blood be found to move upon this occaſion, it is evident it muſt have moved before.

2. The great quantity of blood that is driven out of the heart into the arteries at every pulſe, makes a circulation neceſſary; for though the antients, who knew not this circulation, imagined that only a drop or two was expelled at every ſyſtole, which they were neceſſitated to ſuppoſe, to avoid the too great diſtention that the arteries muſt be liable to, from a more conſiderable influx; yet it is certain, and even demonſtrable, that an ounce, or more, muſt be driven into them each time; and yet ſome compute there are five or ſix thouſand pulſations in an hour.

3. A third argument may be taken from the valves in the veins, which are ſo formed, that blood may freely paſs through them, out of the leſſer veins into the greater, and ſo into the cava; but, on the contrary, not out of the greater into the leſs; yea, if one blow into the cava, through a pipe, there will no wind paſs into the ſmaller veins; but, on the other hand, if you blow up the leſſer veins, the wind will readily paſs to the larger, and ſo to the cava.

4. Any of the arteries being tied up with a fillet, ſwell, and beat between the bandage and the heart, but they grow flaccid between the bandage and the extremities of the body; then, if the artery be cut between the bandage and the heart, blood ſtreams out even to death; but if it be cut between the bandage and the extre-

extremities of the body, the quantity of blood it yields is very ſmall.

5. Any of the larger veins being tied up with a fillet, as in the letting of blood in the arm or foot, then the vein below the ligature will preſently fill and grow tumid, but above it will preſently fall and diſappear: the reaſon of which muſt needs be, that the blood being driven along the arteries, towards the extreme parts, returns by the veins, and aſcends upwards, which coming to the ligature, and being ſtopt there, ſwells the vein below the ligature, and ſpurts out as ſoon as an orifice is made; but when the fillet is looſed again, the blood flows no longer out thereat, but holds on its wonted channel; and the vein and the orifice cloſe up again.

From the whole it is evident that all the arteries of the body are continually bringing the blood from the left part of the heart, through the trunks of the arteries, into the branches, and from thoſe to all parts of the body; and, on the contrary, that all the veins, except the porta, are perpetually bringing back the blood from the extreme parts into the ſmaller branches: from theſe it paſſes into the larger, at length into the trunks, and thence into the cava, and through the ſinus venoſus into the heart, where being arrived, its motion or circulation is continued as follows.

The auricles of the heart being large hollow muſcles, furniſhed with a double ſeries of ſtrong fibres, proceeding with a contrary direction to the oppoſite tendons, the one adhering to the right ventricle, the other to the ſinus venoſus; as alſo with innumerable veins and arteries; by the contractile force of theſe auricles, the blood will be vigorouſly expreſſed and driven into the right ventricle, which, upon this contraction, is rendered flaccid, empty, and diſpoſed to admit it.

Now, if the right ventricle, thus full of blood, by the contraction of its fibres, preſs the blood towards the aperture again, the venous blood at the ſame time pouring in, will drive it back again into the cavity, and mix it more intimately, till riſing up againſt the parietes, it raiſe the valvulæ tricuſpides, which are ſo connected to the fleſhy columns extended on the oppoſite ſide, as that, when laid quite down, they cannot cloſe the parietes of the right ventricle; theſe it thruſts towards the right auricle, till being there joined, they ſtop the paſſage very cloſely, and prevent any return.

By the ſame means, the ſame blood riſes into three ſemilunar valves, placed in the extremity of the other mouth, and lying open to the pulmonary artery; theſe it ſhuts cloſe againſt the ſides of the artery, and leaves a paſſage into the artery alone: the blood carried by this artery into the lungs, and diſtributed by its branches through the whole ſubſtance thereof, is firſt admitted into the extremities of the pulmonary vein, called arteria venoſa, whence paſſing into four large veſſels, which unite together, it is brought to the left ſinus venoſus, or trunk of the pulmonary vein, by the force of whoſe muſculous ſtructure, it is driven into the left ventricle, which, on this occaſion, is relaxed, and by that means prepared to receive it.

Hence, as before, it is driven into the left ventricle, which is relaxed by the ſame means; and by the valvulæ mitrales opening, admit it into the left ventricle, and hinder its flux into the pulmonary vein, from hence it is forced into the aorta, at whoſe orifice there are three ſemilunar valves, which alſo prevent a reflux by cloſing the ſame.

The motion of the blood in living animals is attended with the following phænomena: 1. Both the venous ſinuſes are filled, and grow turgid at the ſame time. 2. Both auricles grow flaccid at the ſame time, and both are filled at the ſame time with blood, impelled by the contractile force of its correſpondent muſcular venous ſinus. 3. Each ventricle contracts and empties itſelf of blood at the ſame time; and the two great arteries are filled and dilated at the ſame time. 4. As ſoon as the blood, by this contraction, is expelled, both ventricles being empty, the heart grows larger and broader. 5. Upon which the muſcular fibres of both venous ſinuſes contract, and expreſs the blood contained in them, into the ventricle of the heart. 6. In the mean time the venous ſinuſes are again filled, as before, and the auricles, &c. return into their former habitude. 7. This alteration continues till the animal begins to languiſh under the approach of death, at which time the auricles and venous ſinuſes make ſeveral palpitations, for one contraction of the ventricle.

In a fœtus, the apparatus for the circulation of the blood is ſomewhat different from

from that in adults, as above deſcribed. The ſeptum, which ſeparates the two auricles of the heart, is pierced through with an aperture, called the foramen ovale, and the trunk of the pulmonary artery, a little after it has left the heart, ſends out a tube into the deſcending aorta, called the communicating canal. The fœtus being born, the foramen ovale cloſes by degrees, and the canal of communication dries up, and becomes a ſimple ligament. Dr. Nichols, lecturer of anatomy at Oxford, has, in his Compend. Anatom. contradicted the common received doctrine of the motion of the heart, and of the circulation of the blood, both in adults and fœtuſes: he maintains, that the circulation of the blood depends on ſix motions; 1. Of the right auricle. 2. Right ventricle. 3. Pulmonary artery. 4. Left auricle. 5. Left ventricle. And, 6. of the aorta. Of theſe, the firſt, third, and fifth are ſynchronous, or act at the ſame time; as the ſecond, fourth, and ſixth likewiſe do; but the firſt, third, and fifth are aſynchronous, or act at a different time from what the ſecond, fourth, and ſixth do, and therefore

The 2 auricles, The 2 ventricles, The 2 arteries } are alternately { relaxed, & contracted.

Concerning the circulation of the blood in fœtuſes, the doctor has the following propoſitions.

1. The blood of the aſcending cava is fitter for nutrition, muſcular motion, and the ſubtile ſecretions, than the blood that is carried to the heart by the deſcending cava.

2. The aſcending and deſcending aorta are dilated and contracted at different times, or have aſynchronous motions.

3. The blood of the aſcending cava is puſhed to the heart at the time when the right auricle is contracted, and the left auricle is relaxed, and therefore it will not paſs into the right auricle, and from that into the left, but muſt go immediately from the cava into the left auricle.

4. The blood which is ſent from the left auricle into the left ventricle, conſiſting moſtly of the blood of the aſcending cava, is wholly diſtributed into the heart and branches of the aſcending aorta.

5. The blood which flows from the deſcending cava into the heart, paſſes partly through the lungs into the left auricle, to be mixed with the blood of the aſcending cava; partly paſſes into the deſcending aorta, not to be mixed with the blood of the aſcending artery, that the blood which is returned to the mother may be venous, weak, and poor *(effætus.)*

6. The canalis arterioſus being ſhut by reſpiration, the deſcending artery acquires a motion ſynchronous to that of the aſcending artery; and the blood of the aſcending cava is ſent to the heart at the time when the left auricle is contracted, and the right auricle is relaxed, and therefore is wholly poured into the right ventricle, along with the blood of the deſcending cava.

7. The contents of the abdomen being preſſed by reſpiration, the umbilical arteries, umbilical veins, and the ductus venoſus are ſhut up.

8. The uſual crying of new born infants contributes much to the diſtention of the lungs, and breaking down the particles of blood.

Dr. Whytt, in an enquiry into the cauſes which promote the circulation of the fluids in the very ſmall veſſels of animals, appears to have ſucceſsfully controverted the opinions of thoſe who have held the force of the heart, the contraction of the arteries, gravity, and the attraction of the capillary tubes, as the cauſes of ſuch a circulation. He contends, that the principal cauſe of promoting the circulation of the fluids, is the vibratory motion of the ſmall veſſels of animals, and that they are poſſeſſed of ſuch a motion, he urges from the teſtimony of many phyſiological writers, and from experiments and obſervations on the veſſels of animals. The circulation, in imperfect animals which have no heart, nor any thing analogous to it, he obſerves, muſt be owing to the contractile power of the veſſels, excited into action by the gentle ſtimulus of the fluids. He endeavours to ſhew an alternate contraction in the ſmall veſſels of animals, which is exerted, more or leſs, according to the degree of irritation affecting them: and concludes, that as the motion of the blood in the larger veſſels, and even capillaries of the firſt order, is owing to the alternate ſyſtole of the heart and arteries; ſo, in the ſerous lymphatic and ſtill ſmaller veſſels, where this force reaches not at all, or is greatly diminiſhed, the circulation ſeems to be carried on chiefly by the vibratory motion of the veſſels themſelves; and the finer fluids being in this manner tranſmitted into the larger veins, the pulſation of neighbouring arteries, action of voluntary muſcles, and alternate compreſſion made upon all

the contents of the abdomen and thorax, by the motion of reſpiration, will promote their return to the heart along with the red blood in the venæ cavæ.

As to the velocity of the circulating blood, and the time wherein the circulation is compleated, ſeveral computations have been made. By Dr. Keil's account, the blood is driven out of the heart into the aorta with a velocity which would carry it twenty-five feet in a minute: but this velocity is continually abated in the progreſs of the blood, in the numerous ſections or branches of the arteries, ſo that before it arrive at the extremities of the body, its motion is infinitely diminiſhed. The ſpace of time wherein the whole maſs of blood ordinarily circulates, is variouſly determined: ſome ſtate it thus, ſuppoſing the heart to make two thouſand pulſes in an hour, and that at every pulſe there is expelled an ounce of blood; as the whole maſs of blood is not ordinarily computed to exceed twenty-four pounds, it muſt be circulated ſeven or eight times over in the ſpace of an hour.

The circulation of the blood is generally ſaid to have been firſt diſcovered in England, in the year 1628, by Dr. Harvey, an ingenious and learned phyſician; tho' there are others who contend for the glory of this moſt important diſcovery: Leonicenus ſays, that Fran. Paoli Sarpi, a Venetian, diſcovered the circulation, but durſt not publiſh his diſcovery for fear of the inquiſition; that he therefore only communicated the ſecret to Fab. ab Aquapendente, who, after his death, depoſited the book he had compoſed on it, in the library of St. Mark, where it lay a long time, till Aquapendente diſcovered the ſecret to Harvey, who then ſtudied under him at Padua, and who, upon his return to England, a land of liberty, publiſhed it as his own. But Sir George Ent has ſhewn, that father Paul received the firſt notion of the circulation of the blood from Harvey's book on that ſubject, which was carried to Venice by the ambaſſador of the republic at the court of England.

The circulation of the blood was altogether unknown to the antients: they thought that all the blood came from the liver, and that the greateſt part of it paſſed into the vena cava, and ſo into all the branches belonging to it; but in ſuch a manner, that in coming out from the liver, a conſiderable quantity of it turns about, and enters into the right cavity of the heart, where it is divided into two parts, one of which runs through the vena arteriosa, into the lungs, and the other through the medium ſeptum into the left cavity; where they ſay it is converted into arterial blood, or vital ſpirits, which is carried into the lungs by the arteria venoſa, and all over the body by the arteria magna and its branches.

CIRCULATION *of the ſpirits or nervous juices.* The circulation of the ſpirits is evinced in the ſame manner as ſome authors chooſe to prove the circulation of the blood, *viz.* that the heart drives out, every hour, three or four thouſand ounces of blood, whereas ordinarily there is not above two thouſand in the whole body, there is a neceſſity for the blood, driven out, to return to the heart, in order to ſupply a fund to be expelled.

In like manner it is ſhewn, that there is formed, each hour, a large quantity of ſpirits, which are nothing but the more ſubtile parts of the blood, driven out from the brain: whence it is inferred that theſe too muſt circulate.

CIRCULATION *of the ſap of vegetables*, is a natural motion of the nutricious juice of plants, from the root to the extreme parts, and thence back again to the root.

That there is a circulation in the bodies of vegetables ſeems to be evinced by the experiments of modern naturaliſts and gardeners, by means of certain veſſels analogous to the veins and arteries in animals. See the articles PLANT and SAP.

CIRCULATION, in chemiſtry, is an operation whereby the ſame vapour, raiſed by fire, falls back, to be returned and diſtilled ſeveral times, and this reduced into its moſt ſubtile parts.

Circulation is performed by diſpoſing the liquor in a ſingle veſſel, ſtopped at top, and called a pelican; or in a double veſſel, conſiſting of two pieces, luted on each other; the lower to contain the liquor, and its vapours. It is performed either by the heat of a lamp, or that of aſhes or of ſand moderately hot; or in dung, or by the ſun. It uſually demands a continued heat of ſeveral days, ſometimes of ſeveral weeks, or even ſeveral months. By circulation the fineſt part of the fluid mounts to the top of the veſſel, and finding no iſſue there, falls back again, and rejoins the matter at bottom, whence it aroſe.

CIRCULATION *of money.* It is the opinion of Mr. Poſtlethwayt, that the money

that carries on the whole circulation of a ſtate, is near the quantity of one third part of all the annual rents of the proprietors of the land; and that where the proprietors have one half or two thirds of the produce of the land, and where the circulation is not much helped by barters and evaluations, the quantity of the money muſt certainly be greater.

CIRCULATORY, *circulatorium*, the chemical veſſel wherein the operation of circulation is performed. See the article CIRCULATION.

CIRCULUS, CIRCLE, in geometry, logic, &c. See the article CIRCLE.

CIRCULUS, in chemiſtry, an iron inſtrument in form of a ring, which being heated red-hot, and applied to the necks of retorts and other glaſs veſſels, till they grow hot, a few drops of cold water thrown upon them, or a cold blaſt, will make the necks fly regularly and evenly off.

Another method of doing this, is to tie a thread, firſt dipt in oil of turpentine, round the place where you would have it break; and then ſetting fire to the thread, and afterwards ſprinkling the place with cold water, the glaſs will crack exactly where the thread was tied.

CIRCUMAGENTES MUSCULI, or OBLIQUI MUSCULI, in anatomy, are certain oblique muſcles of the eyes, ſo called from helping to wind and turn the eyes about.

Theſe muſcles, called alſo the oblique muſcles of the eye, or the rotatores, are two, a larger and a ſmaller: the larger, ariſing near the interior adducens, paſſes through a ſingular trochlea, of an almoſt cartilaginous ſtructure, near the canthus of the eye, from thence it turns back, and is inſerted into the upper part of the eye, near its middle; hence it obliquely depreſſes the pupil, and in ſome degree draws it outward.

The leſſer ariſes from the anterior and inner part of the orbit, not far from the naſal canal: it ſurrounds obliquely the lower part of the bulb, and is inſerted into its exterior part, near the middle; hence it moves the pupil of the eye obliquely upwards: both theſe obliqui acting together, draw the eye forwards; and thus they are antagoniſts of the recti, which draw it backwards.

CIRCUMAMBIENT, an appellation given to a thing that ſurrounds another on all ſides; chiefly uſed in ſpeaking of the air. See the article AIR.

CIRCUMCISION, the act of cutting off the prepuce; or a ceremony in the jewiſh and mahometan religions, wherein they cut off the fore-ſkin of their males, who are to profeſs the one or the other law. Circumciſion, among the Jews, was a federal rite, annexed by God, as a ſeal to the covenant which he made with Abraham and his poſterity, and was accordingly renewed, and taken into the body of the moſaical conſtitutions. The time for performimg this rite was the eighth day, that is, ſix full days after the child was born: the law of Moſes ordained nothing with reſpect to the perſon by whom, the inſtrument with which, or the manner how, the ceremony was to be performed; the inſtrument was generally a knife of ſtone. The child is uſually circumciſed at home, where the father, or godfather, holds him in his arms, while the operator takes hold of the prepuce with one hand, and with the other cuts it off; a third perſon holds a porringer, with ſand in it, to catch the blood; then the operator applies his mouth to the part, and having ſucked the blood, ſpits it into a bowl of wine, and throws a ſtyptic powder upon the wound. This ceremony was uſually accompanied with great rejoicings and feaſting, and it was at this time that the child was named, in preſence of the company. The Jews invented ſeveral ſuperſtitious cuſtoms at this ceremony, ſuch as placing three ſtools, one for the circumciſor, the ſecond for the perſon who holds the child, and the third for Elijah, who, they ſay, aſſiſts inviſibly at the ceremony, &c.

The Jews diſtinguiſhed their proſelytes into two ſorts, according as they became circumciſed, or not: thoſe who ſubmited to this rite were looked upon as children of Abraham, and obliged to keep the laws of Moſes: the uncircumciſed were only bound to obſerve the precepts of Noah, and were called noachidæ.

This ceremony, however, was not confined to the Jews: Herodotus and Philo Judæus obſerve, that it obtained alſo among the Egyptians and Ethiopians. Herodotus ſays, that the cuſtom was very antient among each people, ſo that there was no determining which of them borrowed it from the other. The ſame hiſtorian relates, that the inhabitants of Colchis alſo uſed circumciſion; whence he concludes, that they were originally Egyptians.

The Turks never circumciſe till the ſe-

venth or eighth year, as having no notion of its being neceſſary to ſalvation. The Perſians circumciſe their boys at thirteen, and their girls from nine to fifteen. Thoſe of Madagaſcar cut the fleſh at three ſeveral times; and the moſt zealous of the relations preſent, catches hold of the preputium, and ſwallows it.

Circumciſion is practiſed on women by cutting off the fore-ſkin of the clitoris, which bears a near reſemblance and analogy to the preputium of the male penis. We are told that the Egyptian captive women were circumciſed; and alſo the ſubjects of Preſter John.

CIRCUMCISION is alſo the name of a feaſt, celebrated on the firſt of January, in commemoration of the circumciſion of our Saviour.

CIRCUMFERENCE, in a general ſenſe, denotes the line or lines bounding a plane figure. However, it is generally uſed in a more limited ſenſe, for the curve line which bounds a circle, and otherwiſe called a periphery; the boundary of a right-lined figure being expreſſed by the term perimeter.

Any part of the circumference is called an arch, and a right line drawn from one extreme of the arch to the other, is called a chord.

The circumference of every circle is ſuppoſed to be divided into 360 degrees. The angle at the circumference of a circle is double that at the center. See the article ANGLE.

For the ratio of the circumference of a circle to its radius, ſee the article CIRCLE.

CIRCUMFERENTOR, an inſtrument uſed by ſurveyors, for taking angles.

It conſiſts of a braſs index and circle, all of a piece. The index is commonly about fourteen inches long, and an inch and a half broad; the diameter of the circle is about ſeven inches. On this circle is made a chart, whoſe meridian line anſwers to the middle of the breadth of the index, and is divided into 360 degrees. There is a braſs-ring ſoldered on the circumference of the circle, on which ſcrews another ring, with a flat glaſs in it, ſo as to form a kind of box for the needle, ſuſpended on the pivot in the center of the circle. See plate XLII. fig. 2. n° 1. There are alſo two ſights to ſcrew on, and ſlide up and down the index; as alſo a ſpangle and ſocket ſcrewed on the back ſide of the circle, for putting the head of the ſtaff in.

How to obſerve the quantity of an angle by the CIRCUMFERENTOR.

Let it be required to find the quantity of the angle E K G plate XLII. fig. 2. n° 2. Firſt, place your inſtrument at K, with the flower-de-luce of the chart towards you; then direct your ſights to E, and obſerve what degrees are cut by the ſouth end of the needle, which let be 296; then, turning the inſtrument about, direct your ſights to G, noting then alſo what degrees are cut by the ſouth end of the needle, which ſuppoſe 182. This done, always ſubſtract the leſſer from the greater, as in this example, 182 from 296, the remainder is 114 degrees, which is the true quantity of the angle E K G.

CIRCUMFLEX, in grammar, one of the accents. See the article ACCENT.

CIRCUMGYRATION, denotes the whirling motion of any body round a center: ſuch is that of the planets round the ſun.

CIRCUMINCESSION, in theology, a term whereby the ſchoolmen uſed to expreſs the exiſtence of three divine perſons in one another, in the myſtery of the trinity.

CIRCUMLOCUTION, a paraphraſtical method of expreſſing ones thoughts, or ſaying that in many words, which might have been ſaid in few.

CIRCUMLOCUTION, in oratory, is the avoiding of ſomething diſagreeable, or inconvenient to be expreſſed in direct terms, by imitating the ſenſe thereof in a kind of paraphraſe, ſo conceived as to ſoften and break the force thereof.

CIRCUM-POLAR STARS, an appellation given to thoſe ſtars, which by reaſon of their vicinity to the pole, move round it without ſetting.

CIRCUMSCRIBED, in geometry, is ſaid of a figure which is drawn round another figure, ſo that all its ſides or planes touch the inſcribed figure.

CIRCUMSCRIBED HYPERBOLA, one of Sir Iſaac Newton's hyperbolas of the ſecond order, that cuts its aſymptotes, and contains the parts cut off within its own ſpace.

CIRCUMSCRIBING, in geometry, denotes the deſcribing a polygonous figure about a circle, in ſuch a manner, that all its ſides ſhall be tangents to the circumference.

Sometimes the term is uſed for the deſcribing a circle about a polygon, ſo that each ſide is a chord; but in this caſe it is more uſual to ſay the polygon is inſcribed, than the circle is circumſcribed.

CIR-


BRITISH
MUSEUM

Fig. 1. CIRCULATION of the Blood.

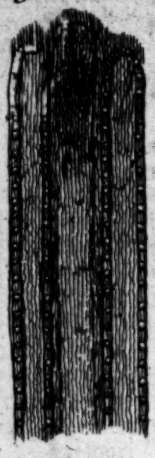


Fig. 2. CIRCUMFERENTOR.

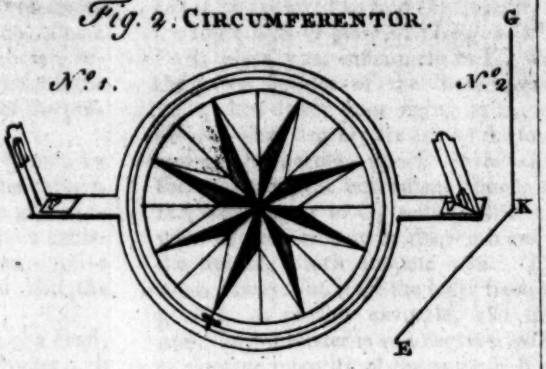


Fig. 3. CISSOID.

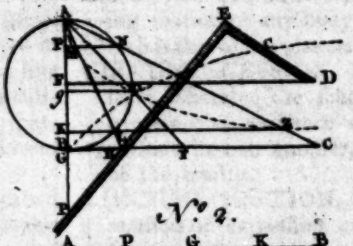


Fig. 4. CIVIC CROWN.



Fig. 5. CLARION.



Fig. 6. CLECHE.



Fig. 8. CONDENSER.



Fig. 7. CLEMATIS, VIRGIN's BOWER.



T. Jefferys sculp

CIRCUMSCRIPTION, in natural philoſophy, the termination, bounds, or limits of any natural body.

They make it either internal, which belongs to the eſſence and quantity of every body, whereby it hath a certain determinate extenſion, bounds, and figure; or external, which they call alſo local, becauſe it is referred to the place within which any body is confined: for a body is ſaid to be circumſcribed locally, or to be in a place circumſcriptively, when it hath a certain and determinate *ubi*, or place, in reſpect of the circumambient bodies.

CIRCUMSTANCE, a particularity which, though not eſſential to any action, yet doth ſome way affect it.

Some circumſtances are reckoned purely phyſical, not connecting any moral good or evil with any action; ſuch as killing a man with a right or left hand, *&c.* others are accounted properly moral, becauſe they do really influence our actions, and render them more good or evil than they would have been without ſuch circumſtances. Divines ſay, that the converſion of a ſinner, depends on a certain aſſemblage and certain management of external circumſtances, in the midſt whereof he is placed; which arrangement of circumſtances depends on the providence of God, whence converſion alſo depends on him.

The writers of ethics ſum up all the circumſtances of the actions of men in this one verſe.

Quis, quid, ubi, quibus auxiliis, cur, quomodo, quando.

CIRCUMSTANTIBUS, in law, a term uſed for ſupplying and making up the number of jurors (in caſe any impannelled appear not, or appearing, are challenged by either party) by adding to them ſo many of the perſons preſent, as will make up the number, in caſe they are properly qualified.

CIRCUMVALLATION, or *line of* CIRCUMVALLATION, in the art of war, is a trench bordered with a parapet, thrown up quite round the beſieger's camp, by way of ſecurity againſt any army that may attempt to relieve the place, as well as to prevent deſertion.

This trench ought to be at the diſtance of cannon ſhot from the place: it is uſually twelve feet broad, and ſeven deep; and at ſmall diſtances is flanked with redoubts, and other ſmall works, or with field forts, raiſed on the moſt proper eminences. It ought never to be drawn at the foot of a riſing ground, leſt the enemy ſeizing on the eminence, ſhould erect batteries of cannon there, and ſo command the line.

CIRCUMVOLUTION, in architecture, denotes the torus of the ſpiral line of the ionic volute.

CIRCUS, in antiquity, a great building of a round or oval figure, erected by the antients, to exhibit ſhews to the people.

The roman circus was a large, oblong edifice, arched at one end, encompaſſed with porticoes, and furniſhed with two rows of ſeats, placed aſcending over each other. In the middle was a kind of foot bank, or eminence, with obeliſks, ſtatues, and poſts at each end. This ſerved them for the courſes of their bigæ and quadrigæ. See the articles, BIGA, *&c.*

Thoſe that have meaſured the circus ſay, that it was 2187 feet long, and 960 broad; ſo that it was the greateſt building in Rome: ſome ſay it would contain 150,000 people, others 260,000, or 300,000.

Julius Cæſar adorned it with magnificent buildings, which he encompaſſed with fine canals of water, called Euripi, to repreſent ſea-fights in. The ſpectators ſat on benches one above another, in the form of a hill. Auguſtus enlarged the circus, and erected an obeliſk 125 feet high. Claudius built ornaments of marble for the dens of wild beaſts, which were exhibited for the pleaſures of the people, that before were made only of earth or wood. Caracalla painted and gilded divers parts of it; and laſtly, Heliogabalus covered the floor with gold and ſilver duſt, and he filled the pits with wine, on which he repreſented a ſea-fight.

The circus was dedicated to the ſun, as a little temple of the ſun in the middle denoted: ſome ſay that there were eight circuſes in Rome, of which ſeveral were either through vanity or devotion built, for the ornament of the city. For the games, *&c.* of the circus, ſee the article CIRCENSIAN.

CIRENCESTER, a borough-town of Glouceſterſhire, ſituated on the river Churn, fifteen miles ſouth-eaſt of Glouceſter: weſt long. 2°, north lat. 51° 42′. It ſends two members to parliament.

CIRRI, among botaniſts, fine ſtrings or thread-like filaments, by which ſome plants faſten themſelves to walls, trees, *&c.* ſuch are thoſe of ivy.

CIRRI, in ichthyology, certain oblong and ſoft

ſoft appendages, not unlike little worms, hanging from the under jaws or mouths of ſome fiſhes: theſe cirri, commonly tranſlated beards, afford marks to diſtinguiſh the different ſpecies of the fiſh on which they are found. As to their uſe, it may be to give notice of approaching danger, or prey; ſince by their hanging poſition, as well as by their ſoft texture, they muſt be more ſenſible of any motion in the water, than any other part.

CIRRIS, in ornithology, the brown ardea, with the head variegated with black and yellow. See the article ARDEA.

CIRSOCELE, or HERNIA VARICOSA, in ſurgery, a preternatural diſtenſion or divarication of the ſpermatic veins in the proceſs of the peritonæum, immediately above the teſticle, and ſometimes higher up in the ſcrotum, or even in the groin, inſomuch that they reſemble the inteſtines of a bird, and equal the ſize of a gooſe quill, with varicoſe nodes, by which means the teſticle appears much bigger, and hangs down lower than it ſhould do. The cauſe of this diſorder is thought to be in the blood, being either too redundant in quantity, or of too thick and gluey a conſiſtence; ſo that by ſtagnating in theſe veins in too great quantities, it cauſes them to be thus preternaturally diſtended. Frequently the diſorder alſo ariſes from ſome external violence whereby the coats of the veſſels are contuſed, overſtretched, and weakened, and the blood by that means impeded in its courſe.

This diſorder ſeldom gives the patient much trouble or uneaſineſs; nor is there any neceſſity for the uſe of medicines, and much leſs any chirurgical operations, except when it becomes intolerable by violent pains.

If through pain, or other uneaſineſs, it becomes neceſſary to try ſome means, as in healthy conſtitutions this diſorder may ariſe from a redundancy of ſemen, in the ſpermatic veins, the moſt ready and effectual remedy will be matrimony; but if the caſe ſhould happen to be in a perſon already married, there is but little room to expect a cure from medicines: however, ſuch topical remedies may be applied, as are known to attenuate the blood, and ſtrengthen the relaxed parts. The patient ſhould alſo be blooded.

When other means have proved ineffectual, and the diſorder ſtill increaſes, the opening thoſe veſſels which are moſt diſtended, the whole length of the tumor, is much approved of; and after letting them diſcharge a few ounces of blood, to make the dreſſings with ſcraped lint, a vulnerary plaſter, compreſs and proper bandage, and to treat the wound, in the ſubſequent dreſſings, with ſome vulnerary balſam.

CISALPINE, any thing on this ſide the Alps. Thus the Romans divided Gaul into ciſalpine and tranſalpine. It muſt be obſerved, however, that what was ciſalpine with regard to the Romans, is tranſalpine with regard to us.

CISLEU, in hebrew chronology, the ninth month of their eccleſiaſtical, and the third of the civil year, anſwering nearly to our November.

CISSAMPELOS, in botany, a genus of the dioecia hexandria claſs of plants, without any calyx: the male flower conſiſts of four ovated, plain, patent petals; the fruit is a globoſe, unilocular berry, containing a ſolitary rugoſe ſeed.

CISSOID, in geometry, a curve of the ſecond order, firſt invented by Diocles, whence it is called the ciſſoid of Diocles. See the article CURVE.

Sir Iſaac Newton, in his appendix *de æquationum conſtructione lineari*, gives the following elegant deſcription of this curve, and at the ſame time ſhews how, by means of it, to find two mean proportionals, and the roots of a cubic equation, without any previous reduction. Let AG, (plate XLII. fig. 3. N°. 1.) be the diameter, and F the center of the circle belonging to the ciſſoid; and from F draw FD, FP at right angles to each other, and let FP be = AG; then if the ſquare PED be ſo moved that one ſide EP always paſſes through the point P, and the end D of the other ſide ED ſlides along the right line FD, the middle point C of the ſide ED, will deſcribe one leg GC of the ciſſoid; and by continuing out FD on the other ſide F, and turning the ſquare about by a like operation, the other leg may be deſcribed.

This curve may likewiſe be generated by points in the following manner.

Draw the indefinite right line BC (*ibid.* N° 2.) at right angles to AB the diameter of the ſemicircle AOB; and draw the right lines AH, AF, AC, &c. then if you take AM = LH, AO = OF, ZC = AN, &c. the points M, O, Z, &c. will form the curve AMOZ of the ciſſoid.

Properties of the CISSOID. It follows from the geneſis, that drawing the right lines PM, KL, perpendicular to AB, the lines AK, PN, AP, PM, as alſo AP, PN,

PN, AK, KL, are continual proportionals, and therefore that AK = PB, and PN = IK. After the ſame manner it appears, that the ciſſoid AMO, biſects the ſemicircle AQB. Sir Iſaac Newton, in his laſt letter to Mr. Leibnitz, has ſhewn how to find a right line equal to one of the legs of this curve, by means of the hyperbola; but ſuppreſſed the inveſtigation, which, however, may be ſeen in his Fluxions. The ciſſoidal ſpace contained under the diameter AB, the aſymptote BC, and the curve AQZ of the ciſſoid, is triple that of the generating circle AQB. See Dr. Wallis's mathematical works, Vol. I. p. 545, and ſeq.

CISSUS, in botany, a genus of plants belonging to the tetrandria-monogynia claſs of Linnæus; the flower of which conſiſts of one petal, lightly divided into four ſegments; and the fruit is a roundiſh berry, containing only a ſingle ſeed.

CISTERCIANS, in church-hiſtory, a religious order founded in the eleventh century by St. Robert, a benedictine. They became ſo powerful, that they governed almoſt all Europe, both in ſpirituals and temporals. Cardinal de Vitri deſcribing their obſervances, ſays, they neither wore ſkins nor ſhirts, nor ever eat fleſh, except in ſickneſs; and abſtained from fiſh, eggs, milk and cheeſe: they lay upon ſtraw-beds in their tunics and cowls: they roſe at midnight to prayers: they ſpent the day in labour, reading and prayer: and in all their exerciſes obſerved a continual ſilence. The habit of the ciſtercian monks is a white robe, in the nature of a caſſock, with a black ſcapulary and hood, girt with a woolen girdle. The nuns wear a white tunic, and a black ſcapulary and girdle.

CISTERN, denotes a ſubterraneous reſervoir of rain-water; or a veſſel ſerving as a receptacle for rain or other water, for the neceſſary uſes of a family.

If a ciſtern is to be made in a cellar to preſerve water for culinary uſes, the brick or ſtone ſhould be laid with terras, or cemented with a compoſition of ſlacked ſifted lime and linſeed oil, tempered together with tow or cotton-wool. In this caſe the bottom ſhould be covered with ſand, to ſweeten and preſerve it.

In making ciſterns, the walls ſhould be good and built to advantage, for fear the water ſhould be loſt; and the inſide ſhould be well cemented, eſpecially in the angles.

There are likewiſe lead-ciſterns, jar-ciſterns, &c. See the article PLUMBERY, &c. Authors mention a ciſtern of Conſtantinople, the vaults of which are ſupported by two rows of pillars, 212 in each row, each pillar being two feet in diameter. They are planted circularly, and in radii, tending to that in the center.

CIST, or CYST. See the article CYST.

CISTIC, or CYSTIC. See CYSTIC.

CISTULA, or *Catoptric* CISTULA. See the article CATOPTRIC.

CISTUS, in botany, a genus of the polyandria-monogynia claſs of plants, the flower of which conſiſts of five roundiſh, plain, patent, very large petals; the fruit is a roundiſh capſule, containing numerous ſmall roundiſh ſeeds. This plant is of an inebriating quality, for which reaſon, in many places of Saxony, they boil it in their beer. They lay it alſo among clothes, to expel moths.

CITADEL, a place fortified with four, five, or ſix baſtions, built on a convenient ground near a city, that it may command it in caſe of a rebellion. The city therefore is not fortified on the part oppoſite to the citadel, tho' the citadel is againſt the city. The beſt form for a citadel is a pentagon, a ſquare being too weak, and a hexagon too big.

CITATION, in eccleſiaſtical courts, is the ſame with ſummons in civil courts. See the article SUMMONS.

A perſon is not to be cited out of the dioceſe where he lives, unleſs it be by the archbiſhop in default of the ordinary, or where the ordinary is party to the ſuit, and in caſes of appeal.

CITATION is alſo a quotation of ſome law, authority, or paſſage of a book.

CITHARA, in antiquity, a muſical inſtrument, the preciſe ſtructure of which is not known; ſome think it reſembled the greek delta Δ; and others, the ſhape of a half moon. At firſt it had only three ſtrings, but the number was at different times increaſed to eight, to nine, and laſtly to twenty-four. It was uſed in entertainments and private houſes, and played upon with a plectrum or quill, like the lyre. See the article LYRE.

CITHAREXYLON, in botany, a genus of the didynamia-angioſpermia claſs of plants; the cup of which is divided into five deep ſegments; and the flower is infundibuliform, and rotated; the ſegments being all equal, and villoſe on the upper ſide.

CITHARISTA, or CITHAROEDUS, in antiquity, one who played on the cithara, diſtin-

diſtinguiſhed from all other muſicians by an embroidered cloak. See CITHARA.

CITILLE, *citillus*, in zoology, a ſpecies of mus, with a ſhort tail, and no auricles or external ears: it is alſo called *mus noricus*. See the article MUS.

CITIZEN, *civis*, a native or inhabitant of a city, veſted with the freedom and liberties of it.

A citizen of Rome was diſtinguiſhed from a ſtranger, becauſe he belonged to no certain commonwealth ſubject to the Romans. A citizen is either by birth or election; and ſons may derive the right from their fathers. To make a good roman citizen, it was neceſſary to be an inhabitant of Rome, to be inrolled in one of the tribes, and to be capable of dignities. Thoſe ſtrangers to whom were granted the rights and privileges of roman citizens, were only honorary citizens. It was not lawful to ſcourge a citizen of Rome.

The Romans were antiently ſo particularly careful to preſerve even their common citizens from any mixture of ſervile blood, that they prohibited all marriages between them and freed ſlaves, or their children. And it was decreed, as a ſpecial privilege and reward to one Hiſpala, of libertine condition, for her diſcovery of the impieties of the bacchanalian myſteries, that a citizen might take her to wife, without any diſgrace and diminution of his rights. Theſe diſtinctions, indeed, began to be diſregarded towards the end of the republic, with reſpect to the ordinary citizens, but were kept up to the laſt, with regard to the ſenate. Auguſtus, upon numbering the roman citizens, found they amounted to upwards of four millions.

CITRINUS, in natural hiſtory, a kind of ſprig cryſtal, of a fine yellow colour.

Many of the common cryſtals, when in the neighbourhood of lead mines, are liable to be accidentally tinged yellow, by an admixture of the particles of that metal; and all theſe, whether finer, or coarſer, have been too frequently confounded together, under the name citrine; but Dr. Hill has aſcertained this to be a peculiar ſpecies of cryſtal, different from all the other kinds in form, as well as colour, and diſtinguiſhed by the name of *ellipomacroſtylum lucidum flaveſcens pyramide brevi*. It is never found colourleſs, like the other cryſtals, but has great variety of tinges, from that of deeper ochres to a pale lemon colour. It is very plentiful in the Weſt-Indies, and is found in ſome parts of Bohemia. Our jewellers have learnt from the French and Italians, who are very fond of it, to call it citrine, and often cut ſtones for rings out of it, particularly out of the pyramid, which is always finer than the column, and theſe, after they have paſſed through two or three hands, are generally miſtaken for topazes.

CITRON-TREE, *citrus*, in botany. See the article CITRUS.

CITRUL, *citrullus*, makes a diſtinct genus of plants, according to ſome, otherwiſe called anguria; but Linnæus comprehends it among the cucumbers: it is ſaid to have the ſame medicinal qualities with the cucurbita or gourd.

CITRUS, the CITRON-TREE, in botany, a genus of the polyadelphia-icoſandria claſs; the flower of which conſiſts of five oblong, plain, patent petals: the fruit is a berry with a fleſhy rind, a pulp conſiſting of veſicles and with nine cells, containing two ſubovated callous ſeeds in each cell.

The fruit of this tree has much the ſame qualities with the lemon, from which it is diſtinguiſhed by its firmneſs, greater bulk, briſker ſmell, and higher colour. We have eſſences, oils, confections, and waters obtained from it.

CITTADELLA, the capital of the iſland of Minorca, about twenty-three miles weſt of Port-Mahon: eaſt longitude 3° 30′, north latitude 40°.

It is likewiſe the name of a town in Italy, in the Padouan, between Vicenza and Trevigni.

CITY, *urbs*, a large populous town, capital of ſome country, province, or diſtrict; or the ſee of a biſhop.

Town and city are frequently uſed in a ſynonymous ſenſe; however, cuſtom ſeems to have appropriated the term city to ſuch towns as are, or formerly were, the ſees of a biſhop: hence it is, that Edinburgh, Glaſgow, &c. are ſtill called cities, though they are no longer the ſees of biſhops, ſince the eſtabliſhment of preſbytery in Scotland.

Many are the cauſes that render large cities more unhealthy than other places, as narrow and dirty ſtreets, crowded jails and hoſpitals, burials within the body of the place, and the like. To the ſtagnation of air, and putrid effluvia, occaſioned by theſe means, are owing a multitude of malignant diſorders, not to be remedied but by purer air and a country life.

Imperial

Imperial CITIES, an appellation given to thoſe cities of Germany, immediately ſubject to the emperor: they make a part of the germanic body, are governed by their own magiſtrates, have the privilege of coining money, and aſſiſt at the diet of the empire: they are forty-eight in all, and are diſtinguiſhed as they occur under their ſeveral articles in the order of the alphabet.

CITY, *civitas*, among the antients, was uſed in a ſynonymous, ſenſe with what we now call an imperial city; or rather anſwered to thoſe of the Swiſs cantons, the republics of Venice, Genoa, *&c.* as being an independent ſtate, with territories belonging to it.

CIVES, the engliſh name of a ſpecies of onion, growing in tufts, and ſeldom exceeding ſix inches in heighth: they never produce any bulbs, and are much uſed in ſallads in ſpring.

CIVET, *zibethum*, a ſoft unctuous matter produced in the manner of muſk, in bags growing from the lower part of the belly of a civet-cat. See ZIBETHICUS.

There is a great trade of civet at Calicut, at Baſſora, and in other parts of the Indies and in Africa. Live cats are alſo to be ſeen in Holland, where they are kept by perſons who draw the civet from them for ſale, the civet at Amſterdam having the preference of what comes from the Levant and the Indies. Civet ſhould be choſen new, and of the ſame colour on the ſurface as within; of a moderate conſiſtence, not too ſoft nor too dry, the former generally denoting its being adulterated, the latter, its being decayed It ſhould be of a very ſtrong diſagreeable ſmell. It is adulterated by mixing with it the gall of an ox and ſtorax liquified. Civet has been greatly eſteemed in medicine as a cordial, ſudorific, and reſiſter of poiſons, and was a long time famous, externally applied to the pudenda of women in hyſteric caſes; but this practice has been found not only ineffectual, but hurtful. It is little uſed at preſent, except in a deafneſs from cold, being an article wholly confined to confectioners and perfumers.

CIVET-CAT, the engliſh name of the animal which produces the civet, called by zoologiſts zibethicus. See ZIBETHICUS.

CIVIC CROWN, *corona civica*, was a crown given by the antient Romans to any ſoldier who had ſaved the life of a citizen in any engagement.

This was accounted more honourable than any other crown, though compoſed of no better materials than oaken boughs. See plate XLII. fig. 4.

It was a particular honour conferred upon any that merited this crown, that when they came to any of the public ſhews, the whole company, as well ſenate as people, ſhould ſignify their reſpect, by riſing up, as ſoon as they ſaw them enter, and that they ſhould take their ſeats upon theſe occaſions among the ſenators; being alſo excuſed from all troubleſome duties and ſervices in their own perſons, and procuring the ſame immunities for their father and grandfather.

CIVADAD-REAL, a city of Spain, in the province of New Caſtile: it is the capital of La Mancha, ſituated on the river Guadiana, ſixty miles ſouth of Toledo: weſt longitude 4° 20′, north latitude 39°.

CIVIDAD-RODRIGO, a city of Spain, in the province of Leon, near the confines of Portugal, ſituated on the river Agnada, forty-five miles ſouth-weſt of Salamanca: weſt longitude 6° 50′, north lat. 40° 40′.

CIVIL, *civilis*, in a general ſenſe, ſomething that regards the policy, public good, or peace of the citizens, or ſubjects of the ſtate; in which ſenſe we ſay, civil government, civil law, civil right, civil war, *&c.*

CIVIL, in a legal ſenſe, is alſo applied to the ordinary procedure in an action, relating to ſome pecuniary matter or intereſt, in which ſenſe it is oppoſed to criminal.

CIVIL-DEATH, any thing that retrenches or cuts off a man from civil ſociety, as a condemnation to the gallies, perpetual baniſhment, condemnation to death, outlawry, and excommunication.

The term is alſo applied to thoſe who are no longer capable of acting in temporal concerns, as thoſe who renounce the world, who retire and make vows in a monaſtery, *&c.*

CIVIL HISTORY. See HISTORY.

CIVIL LAW, is properly the peculiar law of each ſtate, country, or city: but what we uſually mean by the civil law, is a body of laws compoſed out of the beſt roman and grecian laws, compiled from the laws of nature and nations, and, for the moſt part, received and obſerved throughout all the roman dominions for above 1200 years.

The Romans took the firſt grounds of this law from the twelve tables, which

were abridgments of the laws of Solon, at Athens, and of other celebrated cities of Greece; to which they added their own antient cuſtoms of the city of Rome: theſe written laws were ſubject to various interpretations, whence controverſies ariſing, they were determined by the judgment of the learned; and theſe determinations were what they firſt called *jus civile*, after their ſeveral caſes were compoſed; which, leſt the people ſhould make them at pleaſure, were fixed, certain and ſolemn; and this part of their law they called *actiones juris*, caſes at law. The Romans had alſo their *plebiſcita*, which were laws made by the commons, without the authority of the ſenate. The *jus honorarium*, which was an edict of ſome particular magiſtrate, the *ſenatus conſultum*, an ordinance made by the ſole authority of the ſenate, and the *principalis conſtitutio*, which was enacted by the prince or emperor. Theſe laws grew, by degrees, to a vaſt number of volumes, and therefore the emperor Juſtinian commanded his chancellor Tribonianus, with the aſſiſtance of ſome other eminent lawyers, to reduce it to a perfect body.

The body of the civil law is divided into three volumes, which are ſtill remaining, *viz.* the pandects or digeſts, the code, and the inſtitutes: to theſe were afterwards added the authentics or conſtitutions of Juſtinian, called alſo novellæ, or novels.

The civil law is not received at this day in any one nation, without ſome addition or alteration: for ſometimes the feudal law is mixed with it, or general or particular cuſtoms; and often ordinances and ſtatutes cut off a great part of it. In Turkey, the Juſtinian greek code is only uſed. In Italy, the canon law and cuſtoms have excluded a good part of it. In Venice, cuſtom hath almoſt an abſolute government. In the Milaneſe, the feudal law and particular cuſtoms bear ſway. In Naples and Sicily, the conſtitutions and laws of the Lombards are ſaid to prevail. In Germany and Holland, the civil law is eſteemed to be the municipal law; but yet many parts of it are there grown obſolete, and others are altered, either by the canon law, or a different uſage. In Friezland, it is obſerved with more ſtrictneſs; but in the northern parts of Germany, the jus ſaxonicum, lubecenſe, or culmenſe, is preferred to it. In Denmark and Sweden, it hath ſcarce any authority at all. In France, only a part of it is received, and that part is in ſome places as a cuſtomary law; and in thoſe provinces neareſt to Italy, the municipal written law. In criminal caſes, the civil law is more regarded in France; but the manner of trial is regulated by ordinances and edicts. The civil law in Spain and Portugal, is corrected by the *jus regium* and cuſtom. In Scotland, the ſtatutes of the Sederunt, part of the Regiæ Majeſtatis, and their cuſtoms, controul the civil law. In England, it is uſed in the eccleſiaſtical courts, in the courts of the admiralty, and in the two univerſities; yet in all theſe it is reſtrained and directed by the common law.

CIVIL WAR, a war between people of the ſame ſtate, or the citizens of the ſame city.

CIVIL YEAR is the legal year, or annual account of time, which every government appoints to be uſed within its own dominions, and is ſo called in contradiſtinction to the natural year, which is meaſured exactly by the revolution of the heavenly bodies.

CIVILIAN, in general, denotes ſomething belonging to the civil law; but more eſpecially the doctors and profeſſors thereof are called civilians: of theſe we have a college or ſociety in London, known by the name of doctors-commons. See the article DOCTORS-COMMONS.

CIVILIZATION, in law, a judgment which renders a criminal proceſs civil. It is performed by turning the information into an inqueſt and *vice verſa*.

CIVITA CASTELLANA, a city of Italy, in St. Peter's patrimony, ſituated near the river Tiber, twenty-five miles north of Rome: eaſt longitude 13°, north latitude 42° 15′.

CIVITA VECCHIA, a port-town and fortreſs of Italy, in St. Peter's patrimony, ſituated on a bay of the Mediterranean, thirty miles north-weſt of Rome: eaſt longitude 12° 20′, north latitude 42°. It is the ſtation of the gallies belonging to the pope, who has lately declared it a free port.

CLACK, among countrymen, To clack wool, is to cut off the ſheep's mark, which makes the weight leſs, and yields leſs cuſtom to the king.

CLACKMANNAN, the capital of Clackmannanſhire, in Scotland, ſituated on the northern ſhore of the Forth, about twenty-five miles north-weſt of Edinburgh: weſt longitude 3° 40′, north lat. 56° 15′.

The

The county of Clackmannan is joined with that of Kinroſs, which each in their turn chooſe a member to repreſent them in parliament.

CLADONIA, in botany, a genus of moſſes conſiſting of a firm, tough, and flexible matter, formed into ſtalks of a roundiſh figure, ſometimes almoſt ſimple, ſometimes more ramified, and in many of the ſpecies reſembling ſmall ſhrubs.

There are four ſpecies of this genus, *viz.* the forked cladonia, the branched, hollow cladonia, the ſolid, branched cladonia, and the tophaceous cladonia, otherwiſe called the orcelle or canary-weed.

CLAGENFURT, or CLAGENFORT, the capital of Carinthia, in the circle of Auſtria in Germany, 120 miles ſouth-weſt of Vienna: eaſt long. 14°, north lat. 47°.

CLAIM, in law, a challenge of intereſt in any thing that is in poſſeſſion of another, as claim by charter, deſcent, acquiſition, *&c.*

Claim is either verbal or by action, and is ſometimes for lands, ſometimes for goods and chattels. It may be made by the party himſelf, and likewiſe by his ſervant or deputy, but not by a meer ſtranger in his name.

By the common law, claim is to be within a year and a day after the perſon is diſſeized of land.

CLAIM *of liberty*, is a ſuit to the king in the court of exchequer, to have liberties confirmed there by the attorney-general.

CLAIM *of right*. See RIGHT.

Falſe CLAIM, is a term uſed in the foreſt-laws, where a perſon claims more than his due, for which he is liable to be amerced.

Quit CLAIM. See the article QUIT.

Continual CLAIM. See CONTINUAL.

CLAIR-OBSCURE, CHIARO-SCURO, or CLARO-OBSCURO. See the article CLARO-OBSCURO.

CLAKIS, in ornithology, a name uſed in ſome parts of the kingdom for the bernacle. See the article BERNACLE.

CLAMEA ADMITTENDA, *in itinere per attornatum*, is a writ by which the juſtices in eyre are commanded to admit a perſon's claim by attorney, when he is employed in the king's ſervice, and cannot perſonally appear.

CLAMOR, in the french laws, imports the complaint of a perſon imploring juſtice againſt the oppreſſion of another.

CLAMP *in a ſhip*, denotes a piece of timber applied to a maſt or yard, to prevent the wood from burſting; and alſo a thick plank lying fore and aft under the beams of the firſt orlop, or ſecond deck, and is the ſame that the riſing timbers are to the deck.

CLAMP, is likewiſe the term for a pile of unburnt bricks built up for burning. Theſe clamps are built much after the ſame manner as arches are built in kilns, *viz.* with a vacuity betwixt each brick's breadth for the fire to aſcend by; but with this difference, that inſtead of arching, they truſs over, or over ſpan; that is, the end of one brick, is laid about half way over the end of another, and ſo till both ſides meet within half a brick's length, and then a binding brick at the top, finiſhes the arch.

CLAMP-NAILS, ſuch nails as are uſed to faſten on clamps in the building or repairing of ſhips.

CLAMPING, in joinery, is the fitting a piece of board with the grain, to another piece of board croſs the grain. Thus the ends of tables are commonly clamped, to prevent their warping.

CLANCULARII, a ſect of anabaptiſts, who taught that it was not neceſſary to make an open profeſſion of the faith.

CLANDESTINE, any thing done without the knowledge of the parties concerned, or without the proper ſolemnities. Thus a marriage is ſaid to be clandeſtine, when performed without the publication of banns, the conſent of parents, *&c.* And as ſuch marriages are very detrimental to ſociety, as well as deſtructive of the peace and happineſs of private families, the legiſlature has lately thought proper to enact, that all marriages of that kind, from the month of March 1754, ſhall be null and void. See the article MARRIAGE.

CLANGULA, the GOLDEN-EYE, in ornithology, a ſpecies of anas, with a greeniſh black head, a black and white body, and a white ſpot at the mouth. See ANAS.

CLAP, in medicine, the firſt ſtage of the venereal diſeaſe, more uſually called a gonorrhœa. See GONORRHŒA.

CLAP, in falconry, denotes the under part of a hawk's beak.

CLAP-BOARD, among coopers, denotes any kind of boards proper for making caſks or other veſſels of. See the article BOARD.

CLAP-NET, a device for catching larks. You intice the birds with calls, and when they are within your diſtance, you pull a cord, and your net flies up and claps over them. See the article NET.

It is likewiſe called doring or daring.

CLAR, or CLAER, among metallurgiſts, denotes the powder of bone-aſhes, kept for covering the inſides of coppels. See the article COPPEL.

CLARA, or St. CLARA, an iſland of Peru, in South America, ſituated in the bay of Guiaquil, ſeventy miles ſouth-weſt of the city of Guiaquil: weſt longitude 80°, ſouth latitude 3° 30′.

CLARAMONI POWDER, a kind of earth, called *terra de baira*, from the place where it is found: it is famous at Venice, for its efficacy in ſtopping hæmorrhages of all kinds, and in curing malignant fevers.

CLARE, a market town of Suffolk, thirteen miles ſouth of Bury: eaſt longitude 35′, north latitude 52° 15′.

It gives the title of earl to the duke of Newcaſtle.

CLARE is alſo the capital of a county of the ſame name in the province of Connaught, in Ireland, ſituated about ſeventeen miles north-weſt of Limerick: weſt longitude 9°, north latitude 52° 40′.

CLARENCIEUX, the ſecond king at arms, ſo called from the duke of Clarence, to whom he firſt belonged; for Lionel third ſon to Edward III. having by his wife the honour of Clare, in the county of Thomond, was afterwards declared duke of Clarence; which dukedom afterwards eſcheating to Edward IV. he made this earl a king at arms. His office is to marſhal and diſpoſe of the funerals of all the lower nobility, as baronets, knights, eſquires, on the ſouth ſide of the Trent; whence he is ſometimes called Surroy, or South-roy, in contradiſtinction to Norroy.

CLARENDON. The conſtitutions of Clarendon, are certain eccleſiaſtical laws drawn up at Clarendon, near Saliſbury. They were ſixteen in number, all tending to reſtrain the power of the clergy, and readily aſſented to by all the biſhops and barons, the archbiſhop Becket excepted, who oppoſed them at firſt, but was afterwards prevailed upon to ſign them. The pope Alexander III. declared againſt and annulled moſt of them.

CLARENZA, the capital of a dutchy of the ſame name in the Morea: it is a ſea-port town, ſituated in the Mediterranean, twenty-ſix miles ſouth of Petras: eaſt longitude 21° 40, north lat. 37° 40′.

CLARET, a name given by the French to ſuch of their red wines as are not of a deep or high colour. See WINE.

CLARET, in antient pharmacy, was a kind of wine impregnated with aromatics, ſometimes alſo called *hippocras*, or *vinum hippocraticum*, becauſe ſuppoſed to have been firſt preſcribed by Hippocrates.

CLARET WINE-APPLE, is fair, and yields plenty of a pleaſant ſharp juice, from whence it has its name, and not from the colour; it being a white apple, but makes a vinous liquor, which, if well ordered, excels moſt other cyders, eſpecially with a mixture of ſweet apples.

CLARICHORD, or MANICHORD, a muſical inſtrument in form of a ſpinnet.

It has forty-nine or fifty ſtops, and ſeventy ſtrings, which bear on five bridges, the firſt whereof is the higheſt, the reſt diminiſhing in proportion. Some of the ſtrings are in uniſon, their number being greater than that of the ſtops. There are ſeveral little mortoiſes for paſſing the jacks, armed with braſs-hooks, which ſtop and raiſe the chords inſtead of the feather uſed in virginals and ſpinnets: but what diſtinguiſhes it moſt is, that the chords are covered with pieces of cloth, which render the ſound ſweeter, and deaden it ſo, that it cannot be heard at any conſiderable diſtance: whence it comes to be particularly in uſe among the nuns, who learn to play, and are unwilling to diſturb the ſilence of the dormitory.

CLARIFICATION, in chemiſtry, the act of clearing and fining any fluid from all heterogeneous matter or feculencies.

This operation is performed three ways, by decantation, by deſpumation, and by percolature or filtration.

The firſt and moſt ſimple manner of clarification, is by decantation. It is the ſeparating fluids from their groſſer parts, by means of the difference of their ſpecific gravity, and is performed by only ſuffering the fluid to ſtand at reſt, till every thing that will ſubſide is collected at the bottom, and then pouring off from the ſediment, by a gradual inclination of the veſſel, all that part of the fluid which appears clear.

When fluids are to be freed from oils, or ſuch matter as floats, an inſtrument, called a tritorium, or ſeparating funnel, is to be uſed.

When oils, whoſe viſcid conſiſtence is apt to detain impurities, and prevent their ſubſiding, are to be clarified, it is proper, previouſly to decantation, to let them ſtand ſome time within a moderate digeſting heat, by means of which, being

ing more liquified, they will frequently let fall a ſediment, not otherwiſe ſeparable.

The ſecond method, by deſpumation, is performed by adding whites of eggs, firſt well beat together, to the fluid to be clarified; and after a perfect commixture, making them coagulate by means of heat, and thereby carry to the ſurface all the heterogeneous matter, which is entangled by them in their coaleſcence; the impurities, together with the concreted whites of the eggs, appearing as a ſcum on the ſurface of the fluid, is to be taken off with a ſpoon.

The third manner called filtration or percolation, is performed by paſſing, without preſſure, the fluid to be purified, through ſtrainers of flannel, linen-cloth, or paper, which retaining the groſſer parts, ſuffer only the clearer fluid to be tranſmitted.

When flannel is uſed, it is made into a bag, in the form of a cone, and then called Hippocrates's ſleeve, the baſis whereof being turned upwards, and expanded by means of three or four poſts, from which it is made to hang: it is then filled with the fluid, which drops from the apex into a veſſel.

This is moſtly uſed in caſe of decoctions extracts, and all gelatinous and ſaponaceous preparations, where extreme clearneſs is not neceſſary. In ſolutions of ſalts, ſpirits, and other limpid fluids where great tranſparency is expected, paper, or decantation ſubſequent to it thro' flannel, are alone perfectly capable of anſwering the end. The manner of filtering thro' paper, is to put it into a tin or glaſs funnel, to whoſe form it is adapted in the manner of a lining. Linen-cloth is alſo uſed for this purpoſe, tho' but ſeldom, as it purifies with far leſs effect than woolen, unleſs in the ſolutions of gums and gummy extracts. In diſtilled waters, &c. which have a milky hue, or are turbid, clarification is generally effected with fine ſugar, mixt with a ſmall quantity of alum: fine and delicate wines are clarified with fiſh-glue, and thicker wines with omelet, &c.

CLARIGATION, *clarigatio*, in roman antiquity, a ceremony which always preceded a formal declaration of war, performed in this manner: the chief of the heralds went to the territory of the enemy, where, after ſome ſolemn, prefatory indication, he, with a loud voice, intimated that he declared war againſt them for certain reaſons ſpecified, ſuch as an injury done to the roman allies, or the like.

CLARIGATION was alſo uſed for apprehending a man, and holding him to bail, called by the Greeks *androlepſy*.

CLARINO, a trumpet: hence, *a doi clarini* ſignifies, that a piece of muſic is to be played by two trumpets. See the articles TRUMPET, CORNET, &c.

CLARION, a kind of trumpet, whoſe tube is narrower, and its tone acuter and ſhriller than that of the common trumpet. It is ſaid that the clarion, now uſed among the Moors and Portugueſe, who borrowed it from the Moors, ſerved antiently for a treble to ſeveral trumpets, which ſounded tenor and baſs.

CLARION, in heraldry, a bearing as repreſented, plate XLII. fig. 5. he bears ruby, three clarions topaz, being the arms of the earl of Bath, by the name of Granville: Guillim is of opinion, that theſe three clarions are a kind of old-faſhioned trumpets; but others ſay, that they rather reſemble the rudder of a ſhip; others, a reſt for a lance.

CLARO-OBSCURO, or CLAIR-OBSCURE, in painting, the art of diſtributing to advantage the lights and ſhadows of a piece, both with regard to the eaſing of the eye, and the effect of the whole piece.

Thus, when a painter gives his figures a ſtrong relievo, looſens them from the ground, and ſets them free from each other, by the management of lights and ſhadows, he is ſaid to underſtand the claro-obſcuro, which makes one of the great diviſions or branches of painting, the whole of a picture being reſolvable into light and ſhadow.

The doctrine of the claro-obſcuro will come under the following rules. Light may be either conſidered with regard to itſelf, or to its effects; the place wherein it is diffuſed, or its uſe.

For the firſt, light is either natural, or artificial. 1. Natural either comes immediately from the ſun, which is briſk, and its colour various, according to the time of the day; or it is that of a clear air, thro' which the light is ſpread, and whoſe colour is a little bluiſh; or a cloudy air, which is darker, yet repreſents the objects in their genuine colours, with more eaſe to the eye. 2. Artificial light proceeds from fire or flame, and tinges the object with its own colour; but the light it projects is very narrow and confined.

For

For the ſecond, the effects of light are either principal, as when the rays fall perpendicularly on the top of a body, without any interruption, or glancing, as when it ſlides along bodies; or ſecondary, which is for things at a diſtance.

3. For the place, it is either the open campaign, which makes objects appear with greater ſoftneſs; or it is in an incloſed place, where the brightneſs is more vivid, its determination more haſty, and its extremes more abrupt.

4. For the uſe or application, the light of the ſun is always ſuppoſed to be without, and over againſt the picture, that it may heighten the foremoſt figures, the luminaries themſelves never appearing, in regard the light colours cannot expreſs them. The chief light to meet on the chief group, and as much as poſſible, on the chief figure of the ſubject. The light to be purſued over the great parts, without being croſſed or interrupted with little ſhadows. The full force of the principal light to be only in one part of the piece, taking care never to make two contrary lights. Not to be ſcrupulouſly confined to one univerſal light, but to ſuppoſe other acceſſary ones, as the opening of clouds, *&c.* to looſen ſome things, and produce other agreeable effects. Laſtly, the light to be different, according to the quality of things whence it proceeds, and the nature of the ſubjects which receive it.

As for ſhadows, they are diſtinguiſhed, 1. Into thoſe formed on the bodies themſelves by their proper relievos. 2. Thoſe made by adjacent bodies. 3. Thoſe that make the parts of any whole, and the different effects, according to the difference of places.

For the firſt, ſince the different effects of light only appear by ſhadows, their degrees muſt be well managed. The place which admits no light, and where the colours are loſt, muſt be darker than any part that has relievo, and diſpoſed in the front.

Deepenings, which admit not of any light, or reflex of light, muſt never meet on the relievo of any member of any great elevated part, but in the cavities, or joints, of bodies, the folds of draperies, *&c.* and to find occaſion for introducing great ſhadows, to ſerve for the repoſe of the ſight, and the looſening of things, inſtead of many ſhadows which have a pitiful effect.

For the ſecond, the ſhadows made by bodies are either in plain and ſmooth places, or on the earth, wherein they are deeper than the bodies that occaſion them, as receiving leſs reflex light, yet ſtill diminiſh as they depart farther from their cauſe, or on the neighbouring bodies, where they are to follow the form of the ſame bodies, according to its magnitude, and its poſition in reſpect of the light.

For the third, in ſhadows that have parts, the painter muſt obſerve to take for a light in a ſhadowed place, the teint or luſtre of the light part; and on the contrary, for the ſhadow in the lightened part, the teint or luſtre in the ſhadow.

For the fourth, the effects of ſhadows are different, as the place is either wide or ſpacious, as in thoſe coming immediately from the ſun, which are very ſenſible, and their extremes pretty abrupt; from the ſerene air, which are fainter and more ſweet; from the dark air, which appear more diffuſed and almoſt imperceptible; and from an artificial light, which makes the ſhadows deep, and their edges abrupt.

CLARO-OBSCURO, or CHIARO-SCURO, is alſo uſed to ſignify a deſign conſiſting only of two colours, moſt uſually black and white, but ſometimes black and yellow; or it is a deſign waſhed only with one colour, the ſhadows being of a duſky brown colour, and the lights heightened up with white.

The word is alſo applied to two prints of two colours, taken off at twice, whereof there are volumes in the cabinets of the curious in prints.

CLARY, in botany, the engliſh name of the ſclarea of Tournefort, comprehended by Linnæus among the ſpecies of ſalvia, or ſage.

Wild CLARY, the ſame with the horminum of Tournefort, likewiſe accounted by Linnæus a ſpecies of ſage.

CLARY WATER, a ſpirit drawn from an infuſion of the herb clary in ſpirit of wine, being a very pleaſant and excellent cordial.

Etmuller will not have it give place even to caſtor in hyſterical affections; and affirms, that there is no better remedy in colics: but it is not now preſcribed to ſuch purpoſes.

CLASMIUM, in natural hiſtory, conſtitutes a diſtinct genus of gypſums by itſelf, being more ſoft, dull, and opake than other kinds: it neither gives fire with ſteel, nor ferments with aqua fortis; but calcines readily in the fire, and affords a very

a very valuable plaſter of Paris. See the article GYPSUM.

CLASPERS, among gardeners, the ſame with what botaniſts call cirri. See CIRRI.

Theſe claſpers are of a compounded nature between that of a root and a trunk. Their uſe is ſometimes for ſupport only, as in thoſe of vines, briony, &c. whoſe branches being long, ſlender, and fragile, would fall and break, through their own proper weight and that of their fruits, were they not ſupported by theſe claſpers, which take hold of any thing by a natural circumvolution; thoſe of briony have a retrograde motion about every third circle, in the form of a double claſp, ſo that if they miſs one way, they may catch the other. Sometimes claſpers are for ſupply, as in the trunk roots of ivy, which being a plant that mounts up very high, and of a more compact ſubſtance than that of vines, the ſap would not be ſufficiently ſupplied to the upper ſhoots, unleſs theſe aſſiſted the mother root: but they alſo ſerve for ſupport.

CLASS, *claſſis*, an appellation given to the moſt general ſubdiviſions of any thing: thus, animal is ſubdivided into the claſſes quadrupeds, birds, fiſhes, &c. which are again ſubdivided into ſerieſes or orders; and theſe laſt into genera.

CLASS is alſo uſed in ſchools, in a ſynonymous ſenſe with form, for a number of boys all learning the ſame thing.

The diſtributing boys into claſſes, contributes not only to raiſe an emulation among them, but is of great advantage to the maſter; who, by this means, can teach double the number it would otherwiſe be poſſible for him to do.

CLASSIC, or CLASSICAL, an epithet chiefly applied to authors read in the claſſes at ſchools, and who are in great authority there.

This term ſeems to owe its origin to Tullius Servius, who, in order to make an eſtimate of every perſon's eſtate, divided the roman people into ſix bands, which he called claſſes. The eſtate of the firſt claſs was not to be under 200 l. and theſe by way of eminence were called *claſſici*, claſſics: hence authors of the firſt rank came to be called claſſics, all the reſt being ſaid to be *infra claſſem*: thus, Ariſtotle is a claſſic author in philoſophy; Aquinus, in ſchool divinity, &c.

By claſſical learning may be underſtood, ſuch an intimacy with the beſt greek and latin writers, as not only enables the reader to ſee and admire the beauty of their ſeveral compoſitions, but to imitate their manner of writing, to tranſcribe their ſpirit and eloquence, and make their diction and their ſentiment his own.

The principal claſſics in the greek language are, Homeri opera, Platonis opera, Demoſthenis & Æſchinis opera, Xenophon de Cyri inſtitutione, Plutarchi opera, Iſocratis orationes & epiſtolæ, Epicteti encheridion, Luciani opera, Sophoclis tragœdiæ, Euripidis opera, Dionyſius Longinus de ſublimitate, Theocriti quæ extant, Anacreon, Pindari opera, Ariſtophanis comœdiæ, &c.

Claſſics in the latin tongue are, M. Tullii Ciceronis opera, T. Livii hiſtoria, J. Cæſaris commentarii, C. Saluſtii hiſtoria, Virgilius, Horatius, Terentii comœdiæ, Plauti comœdiæ, Juvenalis ſatyræ, Ovidii opera, Plinii epiſtolæ, Plinii hiſtoria naturalis, Valerii Paterculi quæ extant, &c.

CLATHRUS, in botany, a genus of roundiſh muſhrooms; the ſubſtance of which is reticulated, or full of holes, ſomewhat like the meſhes of a net, with continuous ramifications. See MUSHROOM.

CLATTE, in heraldry, an appellation given to irregular lines, not reducible to thoſe commonly uſed. See LINE.

CLAVARIA, in botany, a genus of perpendicular muſhrooms, with an uniform ſurface: this genus, by different authors, has been called *fungoides*, *corallo-fungus*, and *caralloides*. See MUSHROOM.

CLAUDENS PALPEBRAS, in anatomy, a muſcle otherwiſe called orbicularis. See the article ORBICULARIS.

CLAVES INSULÆ, a term uſed in the iſle of Man; where all weighty and ambiguous cauſes are referred to a jury of twelve, who are called claves inſulæ, the keys of the iſland.

CLAVICLES, *claviculæ*, in anatomy, are two bones ſituated tranſverſely and a little obliquely oppoſite to each other, at the ſuperior and anterior part of the thorax, between the ſcapula and ſternum. Their figure is ſomewhat like that of the letter S. their ſubſtance is ſpungy and brittle; their body is a fixt point for the deltoide, maſtoide, pectoral, and ſome other muſcles; they are protuberant for the ſubclavian muſcle; and of their two extremities, the rounder is articulated with the ſternum and with the firſt rib, and the flatter is articulated with the acromion.

The uſes of the clavicles are, 1. To keep

keep the arms from falling too forward upon the breaſt, and to facilitate ſeveral of the motions of the arm, 2. To ſerve for the place of origin for ſeveral muſcles. 3. To defend the great ſubclavian veſſels which run under them.

Fracture of the CLAVICLES. As it is no difficult matter to know when the clavicle is fractured, ſo it is not very hard to reduce it, eſpecially when the fracture is tranſverſe; the operation may be performed in the following manner: an aſſiſtant is to pull the arms of the patient gradually backwards, by which means the clavicles will be properly extended. In the mean time the ſurgeon is to replace the bone, and while the aſſiſtant holds it in that poſition, he is to apply a narrow and thick compreſs, ſo as to fill up the cavities above and below the clavicle. Upon this he is to lay two more narrow compreſſes made in the form of an X; and over all theſe apply a piece of paſteboard, accommodated to the ſhoulder and neck, and firſt ſteeped in ſpirit of wine, or oxycrate. Then he muſt place a ball under the arm, or bind it with a thick roller, to prevent the humerus from ſubſiding; and laſtly, the whole is to be bound up, and the arm ſuſpended in a ſling.

Luxation of the CLAVICLES. They may be diſlocated either from the top of the ſternum, or proceſſus acromion of the ſcapula, by ſome external violence, as a fall, blow, the lifting ſome great weight, or the like. This accident, however, ſeldom happens, by reaſon of their ſtrong ligaments. For the cure, the ſurgeon will find the principal buſineſs to conſiſt in a proper extenſion and reduction of what has been diſplaced, to be performed in the ſame manner as in fractures of the ſame bones: but all poſſible care muſt be taken to perform the bandage with accuracy, becauſe it is the chief remedy; and ſuch as are negligent in this point, ſeldom perform a cure without leaving ſome ſtiffneſs or weakneſs afterwards.

CLAVIS properly ſignifies a key, and is ſometimes uſed in engliſh to denote an explanation of ſome obſcure paſſages in any book or writing.

CLAUSE, in grammer, denotes a member of a period or ſentence.

CLAUSE ſignifies alſo an article, or particular ſtipulation, in a contract, a charge or condition in a teſtament, *&c.*

Thus we ſay, a derogatory clauſe, a penal clauſe, ſaving clauſe, codicillary clauſe, *&c.*

CLAUSENBURG, a large city of Tranſilvania, ſituated on the river Samos, about fifty-five miles north-weſt of Hermanſtat: eaſt longitude 20° 50′, and north latitude 47° 10′.

CLAVUS, in antiquity, an ornament upon the robes of the roman ſenators and knights, which was more or leſs broad, according to the dignity of the perſon: hence the diſtinction of tunica anguſticlavia and laticlavia.

Critics are much divided about the clavi: ſome fancying them to have been a kind of flowers interwoven in the cloth; others will have them to be the buttons or claſps by which the tunic was held together; a third ſort contend that the latus clavus was nothing elſe but a tunic bordered with purple; Scaliger thinks that the clavi did not properly belong to the veſt, but hung down from the neck like chains and ornaments of that nature; but the moſt general opinion makes them to have been ſtuds, ſomething like heads of nails, worked into the tunic. Rubenius, rejecting all theſe opinions, contends that the clavi were no more than purple lines or ſtreaks coming along the middle of the garments, which were afterwards improved to golden and embroidered lines of the ſame nature: and Mr. Dacier maintains that they were purple galoons with which they bordered the fore-part of the tunic, on both ſides, in the place where it came together.

It has been a received opinion, that the anguſticlave diſtinguiſhed the knights from the common people, in the ſame manner as the laticlave did the ſenators from thoſe of the equeſtrian rank: but Rubenius avers that there was no manner of diſtinction between the tunics of the knights and thoſe of the commons. As to the perſons who wore the laticlave, they were either ſons of thoſe ſenators who were patricians, in which caſe they wore it in their childhood, with the prætexta; or the ſons of ſenators who were not patricians, theſe did not put on the laticlave till they applied themſelves to the ſervice of the commonwealth, and to bearing offices.

CLAVUS, in medicine and ſurgery, is uſed in ſeveral ſignifications: 1. Clavus hyſtericus, is a ſhooting pain in the head between the pericranium and cranium, which affects ſuch as have the green-ſickneſs,

neſs. 2. Clavus oculorum, according to Celſus, is a callous tubercle on the white of the eye, taking its denomination from its figure. 3. Clavus imports indurated tubercles of the uterus. 4. Clavus imports a chirurgical inſtrument of gold, mentioned by Amatus Luſitanus, deſigned to be introduced into an exulcerated palate, for the better articulation of the voice. 5. Clavus is a callus or corn on the foot: this ariſes from a too great compreſſion of the cutis, which by this means hardens and forms itſelf into a knot. The cure is by ſoftening them, and then pulling them out. The pulp of a lemon laid to a corn, and bound on all night, often ſoftens it ſo by the morning that it may eaſily be taken off.

CLAW, among zoologiſts, denotes the ſharp-pointed nails, with which the feet of certain quadrupeds and birds are furniſhed.

Crab's CLAWS, in pharmacy. See the article CRAB'S CLAWS.

CLAY, *argilla*, in natural hiſtory, a genus of earths, the characters of which are theſe: they are firmly coherent, weighty, and compact, ſtiff, viſcid, and ductile to a great degree, while moiſt; ſmooth to the touch, not eaſily breaking between the fingers, nor readily diffuſible in water, and when mixed, not readily ſubſiding from it.

Of this genus authors enumerate a great many ſpecies, ſome white, ſome brown, grey, blue, yellow, green, red, black, &c. many of which having been diſtinguiſhed by particular names, will be mentioned, and their peculiar qualities explained, as they occur.

Beſides the uſe of clay for making potter's ware, it is a conſiderable improver of light and ſandy grounds, which, unleſs they be clayed, will bear nothing but rye, with whatever other compoſts they be manured; but once clayed, they will produce oats, barley, peaſe, &c. In Yorkſhire, they lay an hundred load upon an acre of ground, which will keep the ſoil in heart upwards of forty years: indeed the firſt year after being clayed, it bears rank, ill-coloured, and broad-grained barley; but afterwards a plump round corn, like wheat.

CLAY-LANDS, thoſe abounding with clay, whether black, blue, yellow, white, &c. of which the black and the yellow are the beſt for corn.

All clay-ſoils are apt to chill the plants growing on them in moiſt ſeaſons, as they retain too much water: in dry ſeaſons, on the contrary, they turn hard and choke the plants. Their natural produce is weeds, gooſe-graſs, large daiſies, thiſtles, docks, poppies, &c. Some clay-ſoils will bear clover and rye-graſs; and, if well manured, will produce the beſt grain: they hold manure the beſt of all lands, and the moſt proper for them are horſe-dung, pigeon's-dung, ſome kinds of marle, folding of ſheep, malt-duſt, aſhes, chalk, lime, ſoot, &c.

CLAYS, in fortification. See HURDLES.

CLAYTONIA, in botany, a genus of the pentandria-monogynia claſs of plants, the flower of which conſiſts of five ovato-oblong, erect, large petals; the fruit is a roundiſh unilocular capſule, containing ſeveral roundiſh ſeeds.

CLEAR, in building, a term uſed by workmen to ſignify the inſide-work of the houſe.

CLEAR-WALK, a term among cock-fighters, to ſignify the place the fighting-cock is in, and no other.

Cape-CLEAR, a promontory in a little iſland on the ſouth-weſt coaſt of Ireland.

CLEARING *of liquors*. See the article CLARIFICATION.

CLEAT, on ſhip-board, a piece of wood fixed to the yard-arm, to keep the ropes from ſlipping off.

CLEBURY, a market-town of Shropſhire, about twenty-five miles ſouth eaſt of Shrewſbury: weſt longitude 2° 30′, and north latitude 52° 27′.

CLECHE, in heraldry, a kind of croſs, charged with another croſs of the ſame figure, but of the colour of the field. See plate XLII. fig. 6.

CLEDONISM, in antiquity, a kind of divination, concerning the nature of which authors are not agreed, ſome making it the ſame with ornithomancy, and others a peculiar kind by itſelf, drawn from words occaſionally uttered.

CLEF, or CLIFF, in muſic, a mark ſet at the beginning of the lines of a ſong, which ſhews the tone or key in which the piece is to begin; or it is a letter marked on any line, which explains the reſt. It is called clef, or key, becauſe hereby we know the names of all the other lines and conſequently the quantity of every degree or interval: but becauſe every note in the octave is alſo called a key, this letter marked, is, for diſtinction ſake, denominated the ſigned clef; and by this key is meant the principal note of a ſong, in which the melody cloſes.

There are three ſigned clefs, *c*, *f*, *g*;

the cleff of the higheſt part in a ſong, called treble, or alt, is *g* on the ſecond, ſometimes on the firſt, and ſometimes on the third line, counting upwards. The clef of the baſs, or loweſt part, is *f*, generally on the fourth line upwards, and often on the ſecond, third, and fifth. For all the other mean parts, the clef is *c*, ſometimes on one, and ſometimes on another line: indeed ſome that are really mean parts, are frequently ſet with the clef *g*, ſee TREBLE, TENOR, BASS.

It muſt be obſerved, however, that the ordinary ſignatures of the clefs bear little reſemblance to thoſe letters: for their figures, ſee CHARACTER *in muſic*.

The clefs are always taken fifth to one another, that is, the clef *f* is the loweſt, *c* a fifth above it, and *g* a fifth above *c*.

When the clef is changed, it is with deſign to make the ſyſtem comprehend as many of the notes of the ſong as poſſible, and ſo to have the fewer above and below it. If then there be many lines above the clef, and few below it, this purpoſe is anſwered by placing the clef in the firſt or ſecond line; if there be many notes below the clef, it is placed higher in the ſyſtem. In effect, according to the relation of the other notes to the clef-note, the particular ſyſtem is taken differently in the ſcale, the clef-line making one in all the varieties. See SCALE.

But ſtill, in whatever line of the particular ſyſtem the clef is found, it muſt be underſtood to belong to the ſame in the general ſyſtem, and to be the ſame individual note or ſound in the ſcale. By this conſtant relation of clef, we learn how to compare ſeveral particular ſyſtems of the ſeveral parts, and know how they communicate in the ſcale, which lines are uniſon, which are not; for it is not to be ſuppoſed that each part has certain particular bounds, within which another muſt never come. Some notes of the treble may come lower than ſome of the mean parts, or even of the baſs. To put together, therefore, into one ſyſtem, all the parts of a compoſition written ſeparately, the notes of each part muſt be placed at the ſame diſtance above and below the proper clef, as they ſtand in the ſeparate ſyſtem; and becauſe all the notes that are conſonant muſt ſtand perpendicularly over each other, that the notes belonging to each part may be diſtinctly known, they may be made with ſuch differences as ſhall not confound or alter their ſignification as to time, but only ſhew that they belong to this or that part. Thus we ſhall ſee how the parts paſs through one another, and which in every note is higheſt, loweſt, or uniſon.

It muſt be obſerved, that for the performance of one ſingle piece, the clefs only ſerve for explaining the intervals in the lines and ſpaces; ſo that the firſt note may be taken high or low, as we pleaſe: for as the proper uſe of the ſcale is not to limit the abſolute degree of tunes, ſo the proper uſe of the ſigned clef is not to limit the pitch at which the firſt note of any piece is to be taken, but to terminate the tune of the firſt with relation to the firſt, and conſidering all the parts together, to determine the relation of the ſeveral notes, by the relation of their clefs in the ſcale. And in effect, in performing any ſingle part, the clef may be taken in any octave, provided we do not go too high or too low for finding the reſt of the notes of a ſong. But in a concert of ſeveral parts, all the clefs muſt be taken not only in the relation but alſo in the places of the ſyſtem above mentioned, that every part may be comprehended in it.

Signature of the clefs is, according to Mr. Malcolm, the marking the ſyſtems by the flats and ſharps. See the articles FLAT, SHARP, *&c.*

CLEFTS, or CRACKS *in the heels*, a diſeaſe incident to horſes, that comes either by over-hard labour, which occaſions ſurfeits, or by giving them unwholeſome meat, or by waſhing them when hot. For the cure, ſhave away the hair, and apply the oil of hempſeed, or linſeed, and be ſure to keep them clean.

CLEMATIS, VIRGIN'S BOWER, in botany, a genus of the polyandria-polygynia claſs of plants, the flower of which conſiſts of four or five oblong lax petals: there is no pericarpium, but a ſmall receptacle contains ſeveral roundiſh compreſſed ſeeds, crowned with a ſlender filament ſomewhat like a feather. See plate XLII. fig. 7.

CLEMENTINE, among the auguſtine monks, a perſon, who, after having been nine years a ſuperior, becomes a private monk, in conſequence of a bull of pope Clement.

CLEMENTINES, in the canon law, the conſtitutions of pope Clement V.

CLENCH NAILS, in ſmithery. See the article NAIL.

CLEOME, in botany, a genus of plants belonging to the tetradynamia-ſiliquoſa claſs,

claſs, the flower of which conſiſts of four patent petals inclining upwards; the fruit is a cylindrical pod, with two valves and two cells, containing ſeveral roundiſh ſeeds.

CLEPSYDRA, a water-clock, or inſtrument to meaſure time by the fall of a certain quantity of water.

The conſtruction of a CLEPSYDRA. To divide any cylindrical veſſel into parts, to be emptied in each diviſion of time, the time wherein the whole, and that wherein any part is to be evacuated, being given.

Suppoſe a cylindrical veſſel, whoſe charge of water flows out in twelve hours, were required to be divided into parts, to be evacuated each hour: 1. As the part of time 1 is to the whole time 12, ſo is the ſame time 12 to a fourth proportional 144. 2. Divide the altitude of the veſſel into 144 equal parts: here the laſt will fall to the laſt hour; the three next above to the laſt part but one; the five next to the tenth hour; laſtly, the twenty-three laſt to the firſt hour. For ſince the times increaſe in the ſeries of the natural numbers 1, 2, 3, 4, 5, &c. and the altitudes, if the numeration be in a retrograde order from the twelfth hour, increaſe in the ſeries of the unequal numbers 1, 3, 5, 7, 9, &c. the altitudes computed from the twelfth hour will be as the ſquares of the times 1, 4, 9, 16, 25, &c. Therefore the ſquares of the whole time, 144, comprehends all the parts of the altitude of the veſſel to be evacuated. But a third proportional to 1 and 12 is the ſquare of 12, and conſequently it is the number of equal parts in which the altitude is to be divided, to be diſtributed according to the ſeries of the unequal numbers, through the equal interval of hours.

There were many kinds of clepſydræ among the antients; but they all had this in common, that the water ran generally through a narrow paſſage, from one veſſel to another, and in the lower was a piece of cork or light wood, which, as the veſſel filled, roſe up by degrees, and ſhewed the hour. The reader may ſee a deſcription of a very curious clepſydra given by Mr. Hamilton, in n° 479. of the Philoſophical Tranſactions.

CLEPSYDRA is alſo uſed to denote a perforated chemical veſſel, and an inſtrument mentioned by Paracelſus, contrived to convey ſuffumigations to the uterus.

CLERGY, *clerus*, κλῆρος, a general name given to the body of eccleſiaſtics of the chriſtian church, in contradiſtinction to the laity.

The diſtinction of chriſtians into clergy and laity, was derived from the jewiſh church, and adopted into the chriſtian by the apoſtles themſelves: whenever any number of converts were made, as ſoon as they were capable of being formed into a congregation or church, a biſhop or preſbyter, with a deacon, were ordained to miniſter to them. Of the biſhops, prieſts, and deacons the clergy originally conſiſted; but in the third century, many inferior orders were appointed, as ſubſervient to the office of deacon, ſuch as ſubdeacons, acolythiſts, readers, &c.

The privileges and immunities which the clergy of the primitive chriſtian church enjoyed, deſerve our notice. In the firſt place, when they travelled upon neceſſary occaſions, they were to be entertained by their brethren of the clergy, in all places, out of the public revenues of the church. When any biſhop, or preſbyter, came to a foreign church, they were to be complimented with the honorary privilege of performing divine offices, and conſecrating the euchariſt in the church. The great care the clergy had of the characters and reputations of thoſe of their order, appears from hence, that in all accuſations, eſpecially againſt biſhops, they required the teſtimony of two or three witneſſes of good character: nor was any heretic admitted as an evidence, againſt a clergyman. With regard to the reſpect paid to the clergy by the civil government it conſiſted chiefly in exempting them from ſome kind of obligations to which others were liable, and granting them certain privileges and immunities which others did not enjoy.

By the eccleſiaſtical laws, no clergyman was allowed to relinquiſh his ſtation without juſt grounds and leave: but in ſome caſes reſignation was allowed of, as in old age, ſickneſs, or other infirmities. The laws were no leſs ſevere againſt all wandering clergymen, or ſuch, as having deſerted their own church, would fix in no other. There were laws which obliged the clergy to conſtant attendance upon their duty: others inhibited pluralities, or the officiating in two parochial churches; or following any ſecular employments. Another ſort of laws reſpected the outward behaviour of the clergy; ſuch inhibited them from correſponding or converſing too freely with Jews and gentile philoſophers; and there were

keep the arms from falling too forward upon the breaſt, and to facilitate ſeveral of the motions of the arm, 2. To ſerve for the place of origin for ſeveral muſcles. 3. To defend the great ſubclavian veſſels which run under them.

Fracture of the CLAVICLES. As it is no difficult matter to know when the clavicle is fractured, ſo it is not very hard to reduce it, eſpecially when the fracture is tranſverſe; the operation may be performed in the following manner: an aſſiſtant is to pull the arms of the patient gradually backwards, by which means the clavicles will be properly extended. In the mean time the ſurgeon is to replace the bone, and while the aſſiſtant holds it in that poſition, he is to apply a narrow and thick compreſs, ſo as to fill up the cavities above and below the clavicle. Upon this he is to lay two more narrow compreſſes made in the form of an X; and over all theſe apply a piece of paſteboard, accommodated to the ſhoulder and neck, and firſt ſteeped in ſpirit of wine, or oxycrate. Then he muſt place a ball under the arm, or bind it with a thick roller, to prevent the humerus from ſubſiding; and laſtly, the whole is to be bound up, and the arm ſuſpended in a ſling.

Luxation of the CLAVICLES. They may be diſlocated either from the top of the ſternum, or proceſſus acromion of the ſcapula, by ſome external violence, as a fall, blow, the lifting ſome great weight, or the like. This accident, however, ſeldom happens, by reaſon of their ſtrong ligaments. For the cure, the ſurgeon will find the principal buſineſs to conſiſt in a proper extenſion and reduction of what has been diſplaced, to be performed in the ſame manner as in fractures of the ſame bones: but all poſſible care muſt be taken to perform the bandage with accuracy, becauſe it is the chief remedy; and ſuch as are negligent in this point, ſeldom perform a cure without leaving ſome ſtiffneſs or weakneſs afterwards.

CLAVIS properly ſignifies a key, and is ſometimes uſed in engliſh to denote an explanation of ſome obſcure paſſages in any book or writing.

CLAUSE, in grammer, denotes a member of a period or ſentence.

CLAUSE ſignifies alſo an article, or particular ſtipulation, in a contract, a charge or condition in a teſtament, *&c.*

Thus we ſay, a derogatory clauſe, a penal clauſe, ſaving clauſe, codicillary clauſe, *&c.*

CLAUSENBURG, a large city of Tranſilvania, ſituated on the river Samos, about fifty-five miles north-weſt of Hermanſtat: eaſt longitude 20° 50′, and north latitude 47° 10′.

CLAVUS, in antiquity, an ornament upon the robes of the roman ſenators and knights, which was more or leſs broad, according to the dignity of the perſon: hence the diſtinction of tunica anguſticlavia and laticlavia.

Critics are much divided about the clavi: ſome fancying them to have been a kind of flowers interwoven in the cloth; others will have them to be the buttons or claſps by which the tunic was held together; a third ſort contend that the latus clavus was nothing elſe but a tunic bordered with purple; Scaliger thinks that the clavi did not properly belong to the veſt, but hung down from the neck like chains and ornaments of that nature; but the moſt general opinion makes them to have been ſtuds, ſomething like heads of nails, worked into the tunic. Rubenius, rejecting all theſe opinions, contends that the clavi were no more than purple lines or ſtreaks coming along the middle of the garments, which were afterwards improved to golden and embroidered lines of the ſame nature: and Mr. Dacier maintains that they were purple galoons with which they bordered the fore-part of the tunic, on both ſides, in the place where it came together.

It has been a received opinion, that the anguſticlave diſtinguiſhed the knights from the common people, in the ſame manner as the laticlave did the ſenators from thoſe of the equeſtrian rank: but Rubenius avers that there was no manner of diſtinction between the tunics of the knights and thoſe of the commons. As to the perſons who wore the laticlave, they were either ſons of thoſe ſenators who were patricians, in which caſe they wore it in their childhood, with the prætexta; or the ſons of ſenators who were not patricians, theſe did not put on the laticlave till they applied themſelves to the ſervice of the commonwealth, and to bearing offices.

CLAVUS, in medicine and ſurgery, is uſed in ſeveral ſignifications: 1. Clavus hyſtericus, is a ſhooting pain in the head between the pericranium and cranium, which affects ſuch as have the green-ſickneſs,

neſs. 2. Clavus oculorum, according to Celſus, is a callous tubercle on the white of the eye, taking its denomination from its figure. 3. Clavus imports indurated tubercles of the uterus. 4. Clavus imports a chirurgical inſtrument of gold, mentioned by Amatus Luſitanus, deſigned to be introduced into an exulcerated palate, for the better articulation of the voice. 5. Clavus is a callus or corn on the foot: this ariſes from a too great compreſſion of the cutis, which by this means hardens and forms itſelf into a knot. The cure is by ſoftening them, and then pulling them out. The pulp of a lemon laid to a corn, and bound on all night, often ſoftens it ſo by the morning that it may eaſily be taken off.

CLAW, among zoologiſts, denotes the ſharp-pointed nails, with which the feet of certain quadrupeds and birds are furniſhed.

Crab's CLAWS, in pharmacy. See the article CRAB'S CLAWS.

CLAY, *argilla*, in natural hiſtory, a genus of earths, the characters of which are theſe: they are firmly coherent, weighty, and compact, ſtiff, viſcid, and ductile to a great degree, while moiſt; ſmooth to the touch, not eaſily breaking between the fingers, nor readily diffuſible in water, and when mixed, not readily ſubſiding from it.

Of this genus authors enumerate a great many ſpecies, ſome white, ſome brown, grey, blue, yellow, green, red, black, &c. many of which having been diſtinguiſhed by particular names, will be mentioned, and their peculiar qualities explained, as they occur.

Beſides the uſe of clay for making potter's ware, it is a conſiderable improver of light and ſandy grounds, which, unleſs they be clayed, will bear nothing but rye, with whatever other compoſts they be manured; but once clayed, they will produce oats, barley, peaſe, &c. In Yorkſhire, they lay an hundred load upon an acre of ground, which will keep the ſoil in heart upwards of forty years: indeed the firſt year after being clayed, it bears rank, ill-coloured, and broad-grained barley; but afterwards a plump round corn, like wheat.

CLAY-LANDS, thoſe abounding with clay, whether black, blue, yellow, white, &c. of which the black and the yellow are the beſt for corn.

All clay-ſoils are apt to chill the plants growing on them in moiſt ſeaſons, as they retain too much water: in dry ſeaſons, on the contrary, they turn hard and choke the plants. Their natural produce is weeds, gooſe-graſs, large daiſies, thiſtles, docks, poppies, &c. Some clay-ſoils will bear clover and rye-graſs; and, if well manured, will produce the beſt grain: they hold manure the beſt of all lands, and the moſt proper for them are horſe-dung, pigeon's-dung, ſome kinds of marle, folding of ſheep, malt-duſt, aſhes, chalk, lime, ſoot, &c.

CLAYS, in fortification. See HURDLES.

CLAYTONIA, in botany, a genus of the pentandria-monogynia claſs of plants, the flower of which conſiſts of five ovato-oblong, erect, large petals; the fruit is a roundiſh unilocular capſule, containing ſeveral roundiſh ſeeds.

CLEAR, in building, a term uſed by workmen to ſignify the inſide work of the houſe.

CLEAR-WALK, a term among cock-fighters, to ſignify the place the fighting-cock is in, and no other.

Cape-CLEAR, a promontory in a little iſland on the ſouth-weſt coaſt of Ireland.

CLEARING *of liquors*. See the article CLARIFICATION.

CLEAT, on ſhip-board, a piece of wood fixed to the yard-arm, to keep the ropes from ſlipping off.

CLEBURY, a market-town of Shropſhire, about twenty-five miles ſouth eaſt of Shrewſbury: weſt longitude 2° 30′, and north latitude 52° 27′.

CLECHE, in heraldry, a kind of croſs, charged with another croſs of the ſame figure, but of the colour of the field. See plate XLII. fig. 6.

CLEDONISM, in antiquity, a kind of divination, concerning the nature of which authors are not agreed, ſome making it the ſame with ornithomancy, and others a peculiar kind by itſelf, drawn from words occaſionally uttered.

CLEF, or CLIFF, in muſic, a mark ſet at the beginning of the lines of a ſong, which ſhews the tone or key in which the piece is to begin; or it is a letter marked on any line, which explains the reſt. It is called clef, or key, becauſe hereby we know the names of all the other lines and conſequently the quantity of every degree or interval: but becauſe every note in the octave is alſo called a key, this letter marked, is, for diſtinction-ſake, denominated the ſigned clef; and by this key is meant the principal note of a ſong, in which the melody cloſes.

There are three ſigned clefs, *c*, *f*, *g*;

the cleff of the higheſt part in a ſong, called treble, or alt, is *g* on the ſecond, ſometimes on the firſt, and ſometimes on the third line, counting upwards. The clef of the baſs, or loweſt part, is *f*, generally on the fourth line upwards, and often on the ſecond, third, and fifth. For all the other mean parts, the clef is *c*, ſometimes on one, and ſometimes on another line: indeed ſome that are really mean parts, are frequently ſet with the clef *g*, ſee TREBLE, TENOR, BASS.

It muſt be obſerved, however, that the ordinary ſignatures of the clefs bear little reſemblance to thoſe letters: for their figures, ſee CHARACTER *in muſic*.

The clefs are always taken fifth to one another, that is, the clef *f* is the loweſt, *c* a fifth above it, and *g* a fifth above *c*.

When the clef is changed, it is with deſign to make the ſyſtem comprehend as many of the notes of the ſong as poſſible, and ſo to have the fewer above and below it. If then there be many lines above the clef, and few below it, this purpoſe is anſwered by placing the clef in the firſt or ſecond line; if there be many notes below the clef, it is placed higher in the ſyſtem. In effect, according to the relation of the other notes to the clef-note, the particular ſyſtem is taken differently in the ſcale, the clef-line making one in all the varieties. See SCALE.

But ſtill, in whatever line of the particular ſyſtem the clef is found, it muſt be underſtood to belong to the ſame in the general ſyſtem, and to be the ſame individual note or ſound in the ſcale. By this conſtant relation of clef, we learn how to compare ſeveral particular ſyſtems of the ſeveral parts, and know how they communicate in the ſcale, which lines are uniſon, which are not; for it is not to be ſuppoſed that each part has certain particular bounds, within which another muſt never come. Some notes of the treble may come lower than ſome of the mean parts, or even of the baſs. To put together, therefore, into one ſyſtem, all the parts of a compoſition written ſeparately, the notes of each part muſt be placed at the ſame diſtance above and below the proper clef, as they ſtand in the ſeparate ſyſtem; and becauſe all the notes that are conſonant muſt ſtand perpendicularly over each other, that the notes belonging to each part may be diſtinctly known, they may be made with ſuch differences as ſhall not confound or alter their ſignification as to time, but only ſhew that they belong to this or that part. Thus we ſhall ſee how the parts paſs through one another, and which in every note is higheſt, loweſt, or uniſon.

It muſt be obſerved, that for the performance of one ſingle piece, the clefs only ſerve for explaining the intervals in the lines and ſpaces; ſo that the firſt note may be taken high or low, as we pleaſe: for as the proper uſe of the ſcale is not to limit the abſolute degree of tunes, ſo the proper uſe of the ſigned clef is not to limit the pitch at which the firſt note of any piece is to be taken, but to terminate the tune of the firſt with relation to the firſt, and conſidering all the parts together, to determine the relation of the ſeveral notes, by the relation of their clefs in the ſcale. And in effect, in performing any ſingle part, the clef may be taken in any octave, provided we do not go too high or too low for finding the reſt of the notes of a ſong. But in a concert of ſeveral parts, all the clefs muſt be taken not only in the relation but alſo in the places of the ſyſtem above mentioned, that every part may be comprehended in it.

Signature of the clefs is, according to Mr. Malcolm, the marking the ſyſtems by the flats and ſharps. See the articles FLAT, SHARP, *&c.*

CLEFTS, or CRACKS *in the heels*, a diſeaſe incident to horſes, that comes either by over-hard labour, which occaſions ſurfeits, or by giving them unwholeſome meat, or by waſhing them when hot. For the cure, ſhave away the hair, and apply the oil of hempſeed, or linſeed, and be ſure to keep them clean.

CLEMATIS, VIRGIN'S BOWER, in botany, a genus of the polyandria-polygynia claſs of plants, the flower of which conſiſts of four or five oblong lax petals: there is no pericarpium, but a ſmall receptacle contains ſeveral roundiſh compreſſed ſeeds, crowned with a ſlender filament ſomewhat like a feather. See plate XLII. fig. 7.

CLEMENTINE, among the auguſtine monks, a perſon, who, after having been nine years a ſuperior, becomes a private monk, in conſequence of a bull of pope Clement.

CLEMENTINES, in the canon law, the conſtitutions of pope Clement V.

CLENCH NAILS, in ſmithery. See the article NAIL.

CLEOME, in botany, a genus of plants belonging to the tetradynamia-ſiliquoſa claſs,

claſs, the flower of which conſiſts of four patent petals inclining upwards; the fruit is a cylindrical pod, with two valves and two cells, containing ſeveral roundiſh ſeeds.

CLEPSYDRA, a water-clock, or inſtrument to meaſure time by the fall of a certain quantity of water.

The conſtruction of a CLEPSYDRA. To divide any cylindrical veſſel into parts, to be emptied in each diviſion of time, the time wherein the whole, and that wherein any part is to be evacuated, being given.

Suppoſe a cylindrical veſſel, whoſe charge of water flows out in twelve hours, were required to be divided into parts, to be evacuated each hour: 1. As the part of time 1 is to the whole time 12, ſo is the ſame time 12 to a fourth proportional 144. 2. Divide the altitude of the veſſel into 144 equal parts: here the laſt will fall to the laſt hour; the three next above to the laſt part but one; the five next to the tenth hour; laſtly, the twenty-three laſt to the firſt hour. For ſince the times increaſe in the ſeries of the natural numbers 1, 2, 3, 4, 5, &c. and the altitudes, if the numeration be in a retrograde order from the twelfth hour, increaſe in the ſeries of the unequal numbers 1, 3, 5, 7, 9, &c. the altitudes computed from the twelfth hour will be as the ſquares of the times 1, 4, 9, 16, 25, &c. Therefore the ſquares of the whole time, 144, comprehends all the parts of the altitude of the veſſel to be evacuated. But a third proportional to 1 and 12 is the ſquare of 12, and conſequently it is the number of equal parts in which the altitude is to be divided, to be diſtributed according to the ſeries of the unequal numbers, through the equal interval of hours.

There were many kinds of clepſydræ among the antients; but they all had this in common, that the water ran generally through a narrow paſſage, from one veſſel to another, and in the lower was a piece of cork or light wood, which, as the veſſel filled, roſe up by degrees, and ſhewed the hour. The reader may ſee a deſcription of a very curious clepſydra given by Mr. Hamilton, in n° 479. of the Philoſophical Tranſactions.

CLEPSYDRA is alſo uſed to denote a perforated chemical veſſel, and an inſtrument mentioned by Paracelſus, contrived to convey ſuffumigations to the uterus.

CLERGY, *clerus*, κλῆρος, a general name given to the body of eccleſiaſtics of the chriſtian church, in contradiſtinction to the laity.

The diſtinction of chriſtians into clergy and laity, was derived from the jewiſh church, and adopted into the chriſtian by the apoſtles themſelves: whenever any number of converts were made, as ſoon as they were capable of being formed into a congregation or church, a biſhop or preſbyter, with a deacon, were ordained to miniſter to them. Of the biſhops, prieſts, and deacons the clergy originally conſiſted; but in the third century, many inferior orders were appointed, as ſubſervient to the office of deacon, ſuch as ſubdeacons, acolythiſts, readers, &c.

The privileges and immunities which the clergy of the primitive chriſtian church enjoyed, deſerve our notice. In the firſt place, when they travelled upon neceſſary occaſions, they were to be entertained by their brethren of the clergy, in all places, out of the public revenues of the church. When any biſhop, or preſbyter, came to a foreign church, they were to be complimented with the honorary privilege of performing divine offices, and conſecrating the euchariſt in the church. The great care the clergy had of the characters and reputations of thoſe of their order, appears from hence, that in all accuſations, eſpecially againſt biſhops, they required the teſtimony of two or three witneſſes of good character: nor was any heretic admitted as an evidence, againſt a clergyman. With regard to the reſpect paid to the clergy by the civil government it conſiſted chiefly in exempting them from ſome kind of obligations to which others were liable, and granting them certain privileges and immunities which others did not enjoy.

By the eccleſiaſtical laws, no clergyman was allowed to relinquiſh his ſtation without juſt grounds and leave: but in ſome caſes reſignation was allowed of, as in old age, ſickneſs, or other infirmities. The laws were no leſs ſevere againſt all wandering clergymen, or ſuch, as having deſerted their own church, would fix in no other. There were laws which obliged the clergy to conſtant attendance upon their duty: others inhibited pluralities, or the officiating in two parochial churches; or following any ſecular employments. Another ſort of laws reſpected the outward behaviour of the clergy; ſuch inhibited them from correſponding or converſing too freely with Jews and gentile philoſophers; and there were

canons which reſtrained them from eating and drinking in taverns, or being preſent at the public theatres. It was alſo enacted, that no biſhops, preſbyters, or deacons ſhould viſit widows and virgins alone, but in the company of ſome other of the clergy, or ſome grave chriſtians. As to the faſhion of their apparel, it does not appear that, for ſeveral ages, there were any diſtinctions obſerved therein between them and the laity.

The clergy of the church of Rome are diſtinguiſhed into regular and ſecular: the regular clergy conſiſts of thoſe monks or religious, who have taken upon them holy orders of the prieſthood, in their reſpective monaſteries. The ſecular clergy are thoſe which are not of any religious order, and have the care and direction of pariſhes. The proteſtant clergy are all ſeculars.

The romiſh church forbids the clergy of her communion to marry; and pretends that a vow of perpetual celibacy, or abſtinence from conjugal ſociety, was required of the clergy as a condition of their ordination, even from the apoſtolical ages.

The privileges of the engliſh clergy, by the antient ſtatutes, are very conſiderable: their goods are to pay no toll in fairs or markets; they are exempt from all offices but their own; from the king's carriages, poſts, &c. from appearing at ſheriff's tourns, or frank-pledges; and are not to be fined or amerced according to their ſpiritual, but their temporal means. A clergyman acknowledging a ſtatute, his body is not to be impriſoned. If he be convicted of a crime, for which the benefit of clergy is allowed, he ſhall not be burnt in the hand; and he ſhall have the benefit of the clergy *in infinitum*, which no layman can have more than once.

The clergy, by common law, are not to be burdened in the general charges of the laity; nor to be troubled nor incumbered, unleſs expreſly named and charged by the ſtatute; for general words do not affect them: thus, if a hundred be ſued for a robbery, the miniſter ſhall not contribute: neither ſhall they be aſſeſſed to the highway, to the watch, &c.

The revenues of the clergy were antiently more conſiderable than at preſent. Ethelwolph, in 855, gave them a tythe of all goods, and a tenth of all the lands in England, free from all ſecular ſervices, taxes, &c. The charter whereby this was granted them, was confirmed by ſeveral of his ſucceſſors; and William the conqueror, finding the biſhoprics ſo rich, created them into baronies, each barony containing thirteen knight's fees at leaſt: but ſince the reformation the biſhoprics are much impoveriſhed. The revenues of the inferior clergy, in the general, are ſmall, a third part of the beſt benefices being antiently, by the pope's grant, appropriated to monaſteries, upon the diſſolution whereof they became lay-fees. Indeed an addition was made, 2 Annæ, the whole revenues of firſt-fruits and tenths being then granted to raiſe a fund for the augmentation of the maintenance of the poor clergy; purſuant to which, a corporation was formed, to whom the ſaid revenues were conveyed in truſt, &c.

Benefit of CLERGY is an antient privilege, whereby one in orders claimed to be delivered to his ordinary, to purge himſelf of felony: this purgation was to be by his own oath, affirming his innocency, and the oath of twelve compurgators, as to their belief of it, before a jury of twelve clerks: if the clerk failed in his purgation, he was deprived of his character, whereby he became a mere layman; or he was to be kept in priſon till a pardon was obtained: but if he purged himſelf, he was ſet at liberty.

This was formerly admitted, even in caſes of murder; but the antient courſe of the law is much altered upon this head. By the ſtatutes of 18 Eliz. cap. vii. clerks are no more committed to their ordinary to be purged; but every man to whom the benefit of clergy is granted, though not in orders, is put to read at the bar, after he is found guilty, and convicted of ſuch felony, and ſo burnt on the hand, and ſet free for the firſt time, if the ordinary or deputy ſtanding by, do ſay, *legit ut clericus*, otherwiſe he ſhall ſuffer death.

It appears by our law books, that laymen that could read, had the privilege of the clergy ever ſince 25 Edw. III. which allowance never was condemned in parliament, but rather approved of.

Benefit of clergy is taken in many caſes.

CLERICAL, in general, denotes ſomething belonging to a clerk. See the article CLERK.

CLERICO ADMITTENDO, See the article ADMITTENDO.

CLERICO CAPTO *per ſtatutum mercatorum*, a writ for the delivery of a clerk out of priſon,

priſon, who is in cuſtody on the breach of a ſtatute-merchant.

CLERICO CONVICTO *commiſſo gaolæ in defectu ordinarii deliberando*, a writ that formerly lay for delivering to his ordinary, a clerk who had been convicted of felony, if the ordinary did not challenge him, according to the privileges of clerks in thoſe days.

CLERICO *infra ſacros ordines conſtituto non eligendo in officium*, is a writ to releaſe one in holy orders, from an office impoſed upon him.

CLERK, a word originally uſed to denote a learned man, or man of letters: whence the term became appropriated to churchmen, who were from thence called clerks or clergymen; the nobility and gentry being uſually bred up to the exerciſe of arms, and none left but the eccleſiaſtics to cultivate the ſciences.

Acephalous CLERKS, a name given to thoſe, in the VIth century, who ſeparated from their biſhops, and refuſed to live in community with them; in contradiſtinction to canonic clerks, who lived with their biſhop, according to the canons.

CLERK is alſo applied to ſuch as by their courſe of life, exerciſe their pens in any court or office, of which there are various kinds: thus,

CLERK *of the acts*, an officer in the navy-office appointed for recording all orders, contracts, bills, warrants, &c. tranſacted by the lords of the admiralty and commiſſioners of the navy.

CLERK *of the affidavits*, the officer, in the court of chancery, who files all affidavits made uſe of in court.

CLERK *of the aſſiſe*, the perſon who writes all things judicially done by the juſtices of aſſiſe, in their circuits.

CLERK *of the bails*, an officer in the court of king's bench, whoſe buſineſs it is to file all bail-pieces taken in that court, where he always attends.

CLERK *of the check*, an officer belonging to the king's court, ſo called becauſe he has the check and controulment of the yeomen of the guard, and all other ordinary yeomen that belong to the king, queen, or prince. He likewiſe, by himſelf or deputy, ſets the watch in the court. There is alſo an officer in the navy of the ſame name, belonging to the king's yards.

CLERK *of the crown*, an officer, in the king's bench, who frames, reads, and records all indictments againſt offenders, there arraigned or indicted of any public crime. He is likewiſe termed clerk of the crown-office, in which capacity he exhibits informations by order of the court for divers offences.

CLERK *of the crown*, in chancery, an officer whoſe buſineſs it is conſtantly to attend the lord-chancellor, in perſon or by deputy, to write and prepare for the great-ſeal, ſpecial matters of ſtate by commiſſion, both ordinary and extraordinary, *viz.* commiſſions of lieutenancy, of juſtices of aſſiſe, oyer and terminer, gaol-delivery, and of the peace; all general pardons, granted either at the king's coronation, or in parliament: the writs of parliament, with the names of the knights, citizens, and burgeſſes, are alſo returned into his office. He alſo makes out ſpecial pardons, and writs of execution on bonds of ſtatute-ſtaple forfeited.

CLERK *of the declarations*, he that files all declarations after they are engroſſed, in cauſes depending in the court of king's bench.

CLERK *of the deliveries*, an officer of the Tower, whoſe function is to take indentures for all ſtores and ammunition iſſued from thence.

CLERK *of the errors*, in the court of common pleas, an officer who tranſcribes and certifies into the king's bench, the tenor of the record of the action on which the writ of error, made out by the curſitor, is brought there to be determined. In the king's bench, the clerk of the errors tranſcribes and certifies the records of cauſes, by bill, in that court, into the exchequer. And the buſineſs of the clerk of the errors in the exchequer, is to tranſcribe the records certified thither out of the king's bench, and to prepare them for judgment in the exchequer-chamber.

CLERK *of the eſſoins*, in the court of common pleas, keeps the eſſoin roll, or enters eſſoins: he alſo provides parchment, cuts it into rolls, marks the number on them, delivers out all the rolls to every officer, and receives them again when written. See the article ESSOIN.

CLERK *of the eſtreats*, an officer in the exchequer, who every term receives the eſtreats out of the lord-treaſurer's remembrancer's office, and writes them out, to be levied for the crown.

CLERKS *of the green-cloth*. See the article GREEN CLOTH.

CLERK *of the hamper*, or *hanaper*, an officer in chancery, whoſe buſineſs is to receive all money due to the king for the ſeals of charters, letters patent, commiſſions, and writs; alſo the fees due to the

officers for enrolling and examining them.

CLERK *of the enrollments*, an officer of the court of common pleas, that inrolls and exemplifies all fines and recoveries, and returns writs of entry.

CLERK *of the juries*, an officer of the common pleas, who makes out the writs called habeas corpus and diſtringas, for juries to appear either in that court, or at the aſſiſes, after the pannels are returned upon the venire facias. He likewiſe enters into the rolls the awarding theſe writs, and makes all the continuances till verdict is given.

CLERK *comptroller of the king's houſhold*, an officer of the king's court, authoriſed to allow or diſallow the charges of purſuivants, meſſengers of the green-cloth, *&c.* to inſpect and controul all defects of any of the inferior officers; and to ſit in the counting-houſe with the lord-ſteward and other officers of the houſhold, for regulating ſuch matters.

CLERK *of the king's ſilver*, an officer of the common pleas, to whom every fine is brought, after it has paſſed the office of the cuſtos brevium; and who enters the effect of writs of covenant, into a book kept for that purpoſe, according to which all the fines of that term are recorded in the rolls of the court.

CLERK *of the king's great wardrobe*, an officer who keeps an account of all things belonging to the wardrobe.

CLERK *of the market*, an officer of the king's houſe, to whom is given the charge of the king's meaſures and weights, the ſtandards of thoſe that ought to be uſed all over England.

CLERK *of the nichils*, or *nihils*, an officer of the exchequer, who makes a roll of all ſuch ſums as are nichilled by the ſheriffs upon their eſtreats of green wax, and delivers them in to the remembrancer of the treaſury, to have execution done upon them for the king. See the article NIHILS.

CLERK *of the ordnance*, an officer that regiſters all orders concerning the king's ordnance in the tower.

CLERK *of the outlawries*, an officer of the common pleas, and deputy to the attorney general, for making out all writs of capias utlagatum, after outlawry, to which there muſt be the king's attorney's name.

CLERK *of the paper-office*, an officer belonging to the king's bench, whoſe buſineſs is to make up the paper-books of ſpecial pleadings in that court.

CLERK *of the parliament-rolls*, an officer in the houſe of lords, and likewiſe in the houſe of commons, who records all tranſactions in parliament, and engroſſes them fairly in parchment-rolls.

CLERK *of the peace*, an officer belonging to the ſeſſions of the peace, whoſe buſineſs is to read indictments, inrol the proceedings, and draw the proceſs: he likewiſe certifies into the king's bench, tranſcripts of indictments, outlawries, attainders and convictions had before the juſtices of peace, within the time limited by ſtatute, under a certain penalty. This office is in the gift of the cuſtos rotulorum, and may be executed by deputy.

CLERK *of the pells*, an officer that belongs to the exchequer, whoſe buſineſs is to enter every teller's bill into a parchment roll called pellis receptorum, and to make another roll of payments, called pellis exituum.

CLERK *of the petty bag*, an officer of the court of chancery, whereof there are three, the maſter of the rolls being the chief; their buſineſs is to record the return of all inquiſitions out of every ſhire, to make out patents of cuſtomers, gaugers, comptrollers, *&c.* liberates upon extents of ſtatutes ſtaple, conge d'elires for biſhops, ſummons of the nobility, clergy, and burgeſſes to parliament, and commiſſions directed to knights, and others, of every ſhire, for aſſeſſing ſubſidies and taxes.

CLERK *of the pipe*, an officer of the exchequer, who having the accounts of all debts due to the king, delivered out of the remembrancer's office, charges them in a great roll, folded up like a pipe. He writes out warrants to ſheriffs, to levy the ſaid debts on the goods and chattels of the debtors; and if they have no goods, then he draws them down to the treaſurer's remembrancer, to write eſtreats againſt their lands.

CLERK *of the pleas*, an officer of the exchequer, in whoſe office all the officers of the court, having ſpecial privilege, ought to ſue, or be ſued, in any action. In this office alſo actions at law may be proſecuted by other perſons, but the plaintiff ought to be tenant or debtor to the king, or ſome way accountable to him. The under-clerks are attorneys in all ſuits.

CLERKS *of the privy-ſeal*, four officers that attend the lord-privy-ſeal, for writing and making out all things that are ſent by warrant from the ſignet to the privy-ſeal, and to be paſſed the great ſeal; and likewiſe

likewiſe to make out privy-ſeals, upon ſpecial occaſions of his majeſty's affairs, as for loan of money, or the like.

CLERK *of the rolls*, an officer of the chancery, whoſe buſineſs is to make ſearches after, and copies of deeds, offices, &c.

CLERK *of the rules*, an officer of the court of king's bench, who draws up and enters all the rules and orders made in court, and gives rules of courſe in divers writs.

CLERK *of the ſewers*, an officer who writes and records the proceedings of the commiſſioners of the ſewers.

CLERK *of the ſignet*, an officer continually attending upon his majeſty's principal ſecretary, who has the cuſtody of the privy-ſignet, as well for ſealing the king's private letters, as thoſe grants which paſs the king's hand by bill ſigned. There are four of theſe officers, who have their diet at the ſecretary's table.

Six CLERKS, officers in chancery, next in degree below the twelve maſters, whoſe buſineſs is to inrol commiſſions, pardons, patents, warrants, &c. which paſs the great ſeal: they were antiently clerici, and forfeited their places if they married. They are alſo attorneys for parties in ſuits depending in the court of chancery.

CLERK *of the ſuperſedeas*, an officer of the common pleas, who makes out writs of ſuperſedeas, forbidding the ſheriff to return the exigent upon a defendant's appearing thereto on an outlawry.

CLERK *of the treaſury*, an officer belonging to the court of common pleas, who has the charge of keeping the records of the court, makes out all records of niſi prius, and likewiſe all exemplifications of records being in the treaſury. He has the fees due for all ſearches; and has under him an under-keeper, who always keeps one key of the treaſury-door.

CLERK *of the warrants*, an officer of the common pleas, whoſe buſineſs is to enter all warrants of attorney for plaintiffs and defendants in ſuit; and to inrol deeds of bargain and ſale, that are acknowledged in court, or before a judge. His office is likewiſe to eſtreat into the exchequer all iſſues, fines, eſtreats, and amercements, which grow due to the crown in that court.

Riding CLERK. See RIDING.

CLERMONT, a city and biſhop's ſee of France, in the territory of Auvergne, and province of Lyonois, about ſeventy-five miles weſt of Lyons: eaſt longitude 3° 20′, and north latitude 45° 42′.

CLERODENDRUM, in botany, a genus of the didynamia-angioſpermia claſs of plants, the flower of which conſiſts of only one petal, with a ſlender and long tube; its upper lip is concave, erect, obtuſe, and divided into two ſegments; and the under lip, being of the length of the upper, is divided into three reflex and obtuſe ſegments: the fruit is a roundiſh drupe; and the ſeed is roundiſh and ſingle.

CLEROMANCY, κληρομαντεια, a ſort of divination performed by throwing lots, which were generally black and white beans, little clods of earth, or pebbles; alſo dice, or ſuch like things, diſtinguiſhed by certain characters. They caſt the lots into a veſſel, and having made ſupplication to the gods to direct them, drew them out, and, according to the characters, conjectured what ſhould happen to them.

CLERUS, a CLERK. See the article CLERK.

CLETHRA, in botany, a genus of the decandria-monogynia claſs of plants, the flower of which conſiſts of five roundiſh, oblong, recto-patent petals, twice the length of the cup, and broadeſt towards their extremities: the fruit is a roundiſh capſule incloſed in a cup, and formed of three valves, containing three cells: the ſeeds are numerous and angular.

CLEVES, or CLEF, the capital of the dutchy of Cleve, in the circle of Weſtphalia, in Germany, ſituated near the weſtern ſhore of the river Rhine: eaſt long. 5° 36′, and north lat. 51° 40′.

It is ſubject to the king of Pruſſia.

CLEVELAND, a diſtrict in the north-riding of Yorkſhire, from which the noble family of Fitzroy takes the title of duke.

CLEW *of a ſail*, in naval affairs, is the lower corner of it, to which are made faſt the ſheets and tacks: a ſquare ſail hath no clew.

A ſail with a great clew, is one with a great goaring or ſloping down. To ſpread a clew, is ſaid of a ſhip that has a very long yard, and therefore has much canvas in her ſail.

CLEW-GARNET, a rope made faſt to the clew of the ſail, and running from thence to the block, ſeized to the middle of the main and fore-yard, which, in furling, hales up the clew of the ſail cloſe to the middle of the yard.

CLEW-LINE, the ſame to the top-ſails, top-gallant-ſails, and ſprit-ſails, that the clew-

clew-garnet is to the main-ſail and fore-ſail, and has the ſame uſe.

In a guſt of wind, when the top-ſail is to be taken in, it is uſual firſt to hale home the lee clew of the ſail, whereby it becomes eaſier to take in the ſail.

CLIENT, *cliens*, among the Romans, a citizen who put himſelf under the protection of ſome great man, who, in reſpect of that relation, was called patron.

This patron aſſiſted his client with his protection, intereſt, and goods; and the client gave his vote for his patron, when he ſought any office for himſelf or his friends. Clients owed reſpect to their patrons, as theſe owed them their protection.

The right of patronage was appointed by Romulus, to unite the rich and poor together in ſuch a manner, as that one might live without contempt, and the other without envy; but the condition of a client, in courſe of time, became little elſe but a moderate ſlavery.

CLIENT is now uſed for a party in a law-ſuit, who has turned over his cauſe into the hands of a counſellor or ſolicitor.

CLIFF, or CLEF, in muſic. See CLEF.

CLIFFORTIA, in botany, a genus of the dioecia-icoſandria claſs of plants: it has no corolla; the calyx of the female flower is compoſed of three leaves, and is ſituated upon the germen; the ſtyles are two, filiform, long, and plumoſe; the fruit is an oblong roundiſh capſule, containing two cells, in each of which there is a ſingle ſeed, of a round or cylindrical ſhape.

CLIMACTERIC, *annus climactericus*, among phyſicians and natural hiſtorians, a critical year in a perſon's life, in which he is ſuppoſed to ſtand in great danger of death.

According to ſome, every ſeventh year is a climacteric; but others allow only thoſe years produced by multiplying 7, by the odd number 3, 5, 7, and 9, to be climacterical. Theſe years, they ſay, bring with them ſome remarkable change with reſpect to health, life, or fortune; the grand climacteric is the ſixty-third year; but ſome, making two, add to this the eighty-firſt: the other remarkable climacterics are the ſeventh, twenty-firſt, thirty-fifth, forty-ninth, and fifty-ſixth. The credit of climacteric years can only be ſupported by the doctrine of numbers introduced by Pythagoras; though many eminent men, both among the antients and moderns, appear to have had great faith in it.

CLIMATE, in geography, a ſpace upon the ſurface of the terreſtrial globe, contained between two parallels, and ſo far diſtant from each other, that the longeſt day in one differs half an hour from the longeſt day in the other parallel.

The difference of climates ariſes from the different inclination or obliquity of the ſphere: the antients took the parallel wherein the length of the longeſt day is twelve hours and three quarters for the beginning of the firſt climate: as to thoſe parts that are nearer to the equator than that parallel, they were not accounted to be in any climate, either becauſe they may, in a looſe and general ſenſe, be conſidered as being in a right ſphere, though, ſtrictly ſpeaking, only the parts under the equator are ſo; or becauſe they were thought to be uninhabited by reaſon of the heat, and were beſides unknown. The antients, conſidering the diverſity there is in the riſing and ſetting of the heavenly bodies, eſpecially the ſun, and, in conſequence thereof, the difference in the length of the days and nights in different places, divided as much of the earth as was known to them, into climates; and inſtead of the method now in uſe, of ſetting down the latitude of places in degrees, they contented themſelves with ſaying in what climate the place under conſideration was ſituated. According to them, therefore, what they judged the habitable part of the northern hemiſphere was divided into ſeven climates, to which the like number of ſouthern ones correſponded.

A parallel is ſaid to paſs through the middle of a climate, when the longeſt day in that parallel differs a quarter of an hour from the longeſt day in either of the extreme parallels that bound the climate: this parallel does not divide the climate into two equal parts, but the part neareſt to the equator is larger than the other, becauſe the farther we go from the equator, the leſs increaſe of latitude will be ſufficient to increaſe the length of the longeſt day a quarter of an hour.

A Table

A Table of CLIMATES according to Ricciolus, wherein the effects of refraction are allowed for.

Climate.	Parallel.	Latitude.	Longeſt day.	Climate.	Parallel.	Latitude.	Longeſt day.	Climate.	Parallel.	Latitude.	N. lat. Continual D.	N. lat. Continual N.	S. lat. Continual D.	S. lat. Continual N.
	1	2° 59′	12h 15′		15	46° 33′	15h 45′		29	66° 2′	15	12	14	13
I.	2 m.	7 18	12 30	VIII.	16 m.	48 15	16 0	XV.	30 m.	66 53	31	27	30	28
	3	11 29	12 45		17	51 14	16 30		31	67 43	45	41	44	43
II.	4 m.	15 36	13 0	IX.	18 m.	53 46	17 0	XVI.	32 m.	69 30	62	58	60	59
	5	19 33	13 15		19	55 55	17 30		33	71 8	77	71	74	73
III.	6 m.	23 8	13 30	X.	20 m.	57 44	18 0	XVII.	34 m.	73 0	93	87	89	88
	7	26 50	13 45		21	59 20	18 30		35	75 56	108	101	104	103
IV.	8 m.	29 49	14 0	XI.	22 m.	60 39	19 0	XVIII.	36 m.	78 6	124	117	120	118
	9	32 48	14 15		23	61 47	19 30		37	81 10	139	132	135	134
V.	10 m.	35 35	14 30	XII.	24 m.	62 4	20 0	XIX.	38 m.	84 0	156	148	150	149
	11	38 9	14 45		25	64 12	21 0		39	87 40	172	162	164	163
VI.	12 m.	40 32	15 0	XIII.	26 m.	65 10	22 0	XX.	40 m.	90 0	188	180	178	177
	13	42 41	15 15		27	65 43	23 0							
VII.	14 m.	44 42	15 30	XIV.	28 m.	65 54	24 0							

Some of the moderns reckon the different climates by the increaſe of half an hour in the length of the longeſt day, beginning at the equator, and going on till they come to the polar circle towards the pole; they then count the climates by the increaſe of a whole natural day, in the length of the longeſt day, till they come to a parallel, under which the day is of the length of fifteen natural days, or half a month; from this parallel they proceed to reckon the climates by the increaſe of half or whole months, in the artificial day, till they come to the pole itſelf, under which the length of the day is ſix months. Thoſe between the equator and the polar circles, are called hour climates; and thoſe between the polar circles and the poles, month climates. Vulgarly the term climate is beſtowed on any country or region differing from one another, either in reſpect of the ſeaſons, the quality of the ſoil, or even the manners of the inhabitants, without any regard to the length of the longeſt day.

CLIMAX, or GRADATION, in rhetoric, a figure wherein the word or expreſſion which ends the firſt member of a period begins the ſecond, and ſo on; ſo that every member will make a diſtinct ſentence, taking its riſe from the next foregoing, till the argument and period be beautifully finiſhed: or in the terms of the ſchools, 'tis when the word or expreſſion, which was predicate in the firſt member of a period, is ſubject to a ſecond, and ſo on, till the argument and period be brought to a noble concluſion; as in the following gradation of Dr. Tillotſon. "After we have practiſed "good actions a while, they become "eaſy; and when they are eaſy, we be"gin to take pleaſure in them; and "when they pleaſe us, we do them fre"quently; and by frequency of acts, a "thing grows into a habit; and con"firmed habit is a ſecond kind of na"ture; and ſo far as any thing is natu"ral, ſo far it is neceſſary, and we can "hardly do otherwiſe; nay, we do it "many times, when we do not think "of it."

CLINCH, in the ſea-language, that part of a cable which is bended about the ring of the anchor, and then ſeized, or made faſt.

CLINCHING, in the ſea-language, a kind of ſlight caulking uſed at ſea, in a proſpect of foul weather, about the poſts: it conſiſts in driving a little oakum into their ſeams, to prevent the water's coming in at them.

CLINIC, a term applied by the antient church-hiſtorians, to thoſe who received baptiſm on their death bed.

It was the doctrine of many of the fathers, that baptiſm waſhed away all previous ſins, and that there was no attonement for ſins committed after baptiſm. On this account many deferred that ſacrament till they were arrived at the laſt ſtage of life, and were pretty ſafe from

from the danger of ſinning any more.

CLINIC, in a modern ſenſe, is ſeldom uſed but for a quack, or rather for an empirical nurſe, who pretends to have learned the art of curing diſeaſes by attending on the ſick.

CLINIC MEDICINE, *medicina clinica*, was particularly uſed for the method of viſiting and treating ſick perſons in bed, for the more exact diſcovery of all the ſymptoms of their diſeaſe.

CLINOIDES, in anatomy, are four ſmall proceſſes in the inſide of the os ſphenoides, forming a cavity called ſella turcica, in the middle of that bone in which lies the glandula pituitaria.

CLINOPODIUM, in botany, a genus of the didynamia-gymnoſpermia claſs of plants, whoſe corolla conſiſts of one ringent petal: it has no pericarpium; the cup is contracted at the neck, gibbous at the belly, and contains four roundiſh ſeeds.

CLITORIA, in botany, a genus of the diadelphia-decandria claſs of plants: the flower is papilionaceous: the vexillum is very large, patent, and plicatile: the alæ are oblong and obtuſe, and ſhorter than the vexillum: the carina is ſhorter than the alæ, and is roundiſh and hooked: the fruit is a very long pod, compreſſed, having one cell and two valves; the ſeeds are numerous, and kidney-ſhaped.

CLITORIS, or as ſome call it, *mentula muliebris*, in anatomy, a part of the external female pudenda, ſituated at the angle which the nymphæ form with each other.

Its common ſtate is to be almoſt entirely buried under the ſkin or prepuce. Its general ſize is that of the uvula, or ſcarce ſo much: its ſhape much reſembles the ſhape of that part, yet it ſometimes is found of an extraordinary bigneſs, as large as the penis: but even in this caſe, it has no urethra. It has a glans or apex as the penis has, but this is not perforated. It is uſually covered with a fœtid matter, like that of the glans of the penis. The prepuce, covering the glans of the clitoris, is formed of the cutis of the pudendum, and furniſhed with nervous papillæ: hence it is of exquiſite ſenſibility to the touch. It has alſo a ligament, by which it is connected to the oſſa pubis, in the ſame manner as the penis is in men. Its uſe is to produce a titillation in the coitus, and to encreaſe the pleaſure.

CLOACA, in roman antiquity, the common ſewer, by which the filth of the city of Rome was carried away.

It was built with great ſtones, in the form of an arch, ſo well faſtened and cemented together, that the continual running of water and filth had not damaged it in the ſpace of 700 years. There were many ſinks in the city, which all fell into this common ſewer; and the officers appointed to take care of this work, and to ſee it repaired, were called *curatores cloacarum urbis*.

CLOACA, in comparative anatomy, imports the canal in birds, through which the egg deſcends from the ovary in its exit.

CLOATHED, in the ſea-language. A maſt is ſaid to be cloathed, when the ſail is ſo long as to reach down to the gratings of the hatches, ſo that no wind can blow below the ſail.

CLOCK, a kind of movement, or machine, ſerving to meaſure time.

The invention of clocks is attributed to Pacificus, archdeacon of Verona, who lived in the time of Lotharius: others aſcribe it to Boëtius, about the year 510: be that as it will, it is certain that the art of making clocks, ſuch as are now in uſe, was either firſt invented, or at leaſt retrieved in Germany, about 230 years ago; and the invention of pendulum clocks, ſo late as the laſt age, is diſputed between Huygens and Galileo.

Principles of CLOCK *and* WATCH *work.*

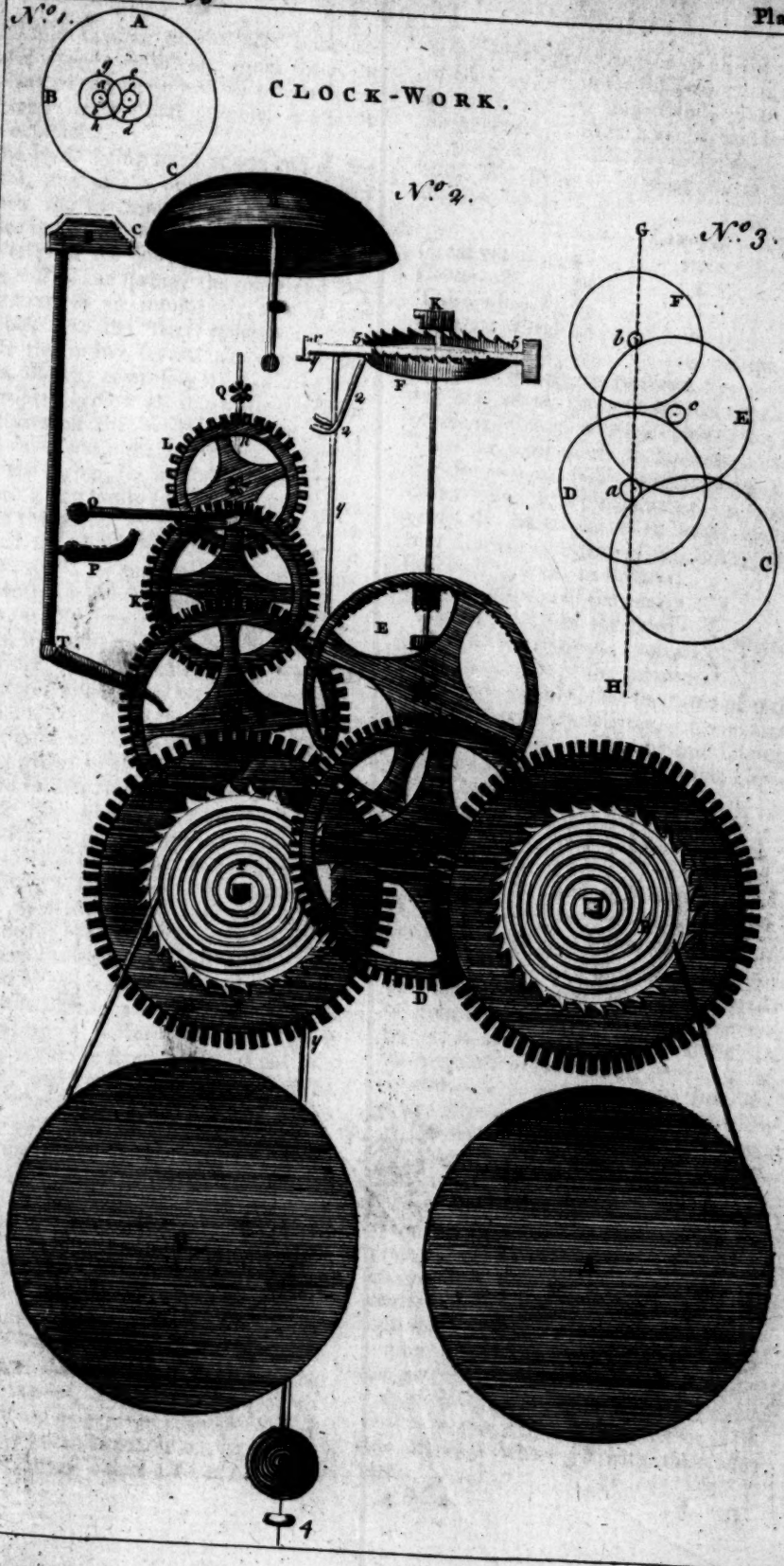
In all automata, or machines of clock-work, there is a natural agent, or principle of motion, which, by acting on one part, gives motion to that and all the other parts depending upon it, and conſequently becomes the primum mobile, or firſt mover, to the whole machine.

In common clocks and watches, this is of two ſorts, *viz.* a ſpring or a weight; either of which may be made to act with any determinate force: the ſpring, by its elaſticity; and the weight, by its gravity. In theſe machines this force is required to be ſuch as will overcome the *vis inertiæ*, and friction, of all the parts in motion, which in watches is very inconſiderable, but in clocks is much greater, and that in proportion as they are more compounded.

The manner that a weight acts upon the cylinder, about which the line or cord (to which it hangs) is wound, is eaſy to be underſtood by all: but the action of the ſpring coiled up within the cylindric barrel, or box of a clock or watch, is ſomewhat more nice and myſterious;

and

CLOCK-WORK.



BRITISH MUSEUM

and the manner how it acts upon the fusee always with an equal force, by means of the chain and the proper figure of the fusee, for that purpose, is next to be explained.

The chain being fixed at one end of the fusee, and at the other to the barrel; when the machine is winding up, the fusee is turned round, and of course the barrel; on the inside of which is fixed one end of the spring, the other end being fixed to an immovable axis in the center. As the barrel moves round, it coils the spring several times about the axis, thereby encreasing its elastic force to a proper degree: all this while the chain is drawn off the barrel upon the fusee, and then when the instrument is wound up, the spring, by its elastic force endeavouring constantly to unbend itself, acts upon the barrel, by carrying it round, by which the chain is drawn off from the fusee; and thus turns the fusee, and consequently the whole machinery.

Now, as the spring unbends itself by degrees, its elastic force, by which it affects the fusee, will gradually decrease; and therefore, unless there were some mechanical contrivance in the figure of the superficies of the fusee, to cause, that as the spring grows weak, the chain shall be removed farther from the center of the fusee, so that what is lost in the spring's elasticity, is gained in the length of the lever: were it not for this contrivance, the spring's force would always be unequal upon the fusee, and thus would turn the fusee, and consequently the whole machinery unequally. All which is remedied by the conical figure of the fusee.

The fusee being acted upon, or put in motion, by an uniform force, the great wheel, which is fixed to it, is put into motion, and that drives the pinion of the center-wheel, which center wheel drives the pinion of the third wheel, and this drives the pinion of the contrate wheel, and this the pinion of the balance-wheel, which plies the two pallets on the axis of the balance, and keeps the balance in motion.

The balance in a watch is instead of the pendulum in a clock, both serving to govern the motion of the whole machinery. To this balance is fixed a small steel spiral spring, which regulates the motions thereof, and makes it equable: whence it has its name of regulator.

When the watch is wound up, the chain from the spring exerts a force upon the fusee, which gives motion to all the parts of the machine, in the following manner; as will be easy to understand, when the number of teeth in each wheel, and leaves in the pinions which they drive, are specified, and these in modern thirty-hour watches are as follows.

	Teeth.	Leaves.
Great wh	48	12
Center-wh	54	6
Third whee l	84	6
Contrate wheel	48	6
Balance-wheel	15	2 pallets.

Hence it is easy to conceive how often any one wheel moves round in the time of one revolution of that which drives it. Thus the great wheel on the fusee, having forty-eight teeth, and driving the center-wheel by a pinion of twelve, must cause the center-wheel to move round four times in one turn of the fusee, and so for all the rest, as follows.

12)48(4=turns of the center
6)54(9=turns of the third
6)48(8=turns of the contrate } wheel.
6)48(8=turns of the balance

Whence it follows, that the turns of each of these wheels respectively, in one turn of the fusee, will be had by multiplying those several quotients together successively as follows.

	1	fusee wheel
4×1=	4	center-wheel
9×4×1=	36	third wheel
8×9×4×1=	288	contrate wheel
8×8×9×4×1=	2304	balance wheel

Turns of the

See the article BEATS *of a watch*.

But all that has been hitherto said, shews only the minutes of an hour, and seconds or quarter seconds of a minute, for nothing has been yet mentioned relating to the mechanism for shewing the hour of the day. This part of the work lies concealed from sight, between the upper plate of the watch-frame and the dial-plate. In this work, ABC (plate XLIII. N°. 1.) is the uppermost side of the frame-plate, as it appears when detached from the dial-plate: the middle of this plate is perforated with a hole, receiving that end of the arbor of the center-wheel, which carries the minute-hand; near the plate is fixed a pinion *ab* of ten teeth: this is called the pinion of report; it drives a wheel *cd* of forty teeth; this wheel *cd* carries a pinion *ef* of twelve teeth; and this drives a wheel *gh* with thirty-six teeth.

As in the body of the watch the wheels every where divide the pinions, here, on the contrary, the pinions divide the wheels, and by that means decreaſe the motion, which is here neceſſary; for the hour-hand, which is carried on a ſocket fixed on the wheel *g b*, is required to move but once round, while the pinion *a b* moves twelve times round. To this end the motion of the wheel *c d* is $\frac{1}{4}$ of the pinion *a b*: again, while the wheel *c d*, or the pinion *e f*, goes once round, it turns the wheel *g b* but $\frac{1}{3}$ part round; conſequently the motion of *g b* is but $\frac{1}{3}$ of $\frac{1}{4}$ of the motion of *a b*; but $\frac{1}{3}$ of $\frac{1}{4} = \frac{1}{12}$, that is, the hour-wheel *g b* moves once round in the time that the pinion of report, on the arbor of the center or minute-wheel, makes twelve revolutions, as required.

Having thus ſhewn the nature and mechaniſm of a watch, the ſtructure of that part of a clock which is concerned in ſhewing the time, will eaſily be underſtood.

The mechaniſm of a clock conſiſts of two parts, one to ſhew the time, the other to report it, by ſtriking the hour upon a bell. Each part is actuated or moved by weights, as in common clocks; or by ſprings included in boxes or barrels, as that repreſented by A. (*ibid.* N°. 2.) This cylinder moves the fuſee B, and the great wheel C (to which it is fixed) by the line or cord that goes round each, and anſwers to the chain of the watch.

The method of calculating is here much the ſame as before: for, ſuppoſe the great wheel C goes round once in twelve hours, then if it be a royal pendulum-clock, ſwinging ſeconds, we have $60 \times 60 \times 12 = 43200$ ſeconds or beats, in one turn of the great wheel. But becauſe there are 60 ſwings or ſeconds in one minute, and the ſeconds are ſhewn by an index on the end of the arbor of the ſwing wheel, which in theſe clocks is in an horizontal poſition; therefore, it is neceſſary that the ſwing wheel ſhould have thirty teeth, whence $60)43200(= 720$, the number to be broken into quotients for finding the number of teeth for the other wheels and pinions, as before.

In ſpring clocks, the diſpoſition of the wheels in the watch-part is ſuch as is here repreſented in the figure, where the ſwing wheel F is in an horizontal poſition, the ſeconds not being ſhewn there by an index, as is done in the large pendulum clocks. Whence in theſe clocks, the wheels are diſpoſed in a different manner, as repreſented in N°. 3. *ibid.* where C is the great wheel, D the center or minute-wheel, both as before; but the contrate wheel E is placed on one ſide, and F the ſwing wheel is placed with its center in the ſame perpendicular line G H, with the minute wheel, and with its plane perpendicular to the horizon, as are all the others. Thus the minute and hour-hands turn on the end of the arbor of the minute-wheel at *a*, and the ſecond hand on the arbor of the ſwing-wheel at *b*.

With regard to the machinery of the ſtriking part of a clock, it is to be obſerved that, as in the watch part, the primum mobile is a large ſpring, in the ſpring-barrel G, (*ibid.* N°. 2.) but in long pendulums, it is a weight. Thus, by its cord and fuſee, it moves the great wheel H; that gives motion to the pin-wheel I; that continues it to the detent or hoop-wheel K, and that to the warning-wheel L, which at laſt is ſpent on the flying pinion Q; this carries the fly or fan; and by its great velocity it meets with much reſiſtance from the air it ſtrikes, and by this means bridles the rapidity of the clock's motion, and renders it equable. All theſe wheels are quieſcent, unleſs when at the beginning of each hour, the detent O is lifted up, by which means the work is unlocked, and the whole put into motion, by means of the ſpring in the box G. During this motion the pins *e*, *e*, *e*, *e*, of the pin-wheel I, take the tail of the hammer T, and carrying it upwards, removes the head of the hammer S from the bell R; then being let go by the pin, it is made by a ſtrong ſpring to give a forcible ſtroke upon the bell, and this is reported as often as the hour requires, by means of a contrivance in another part. This conſiſts of moveable wheels and ſeveral leaves and other parts which cannot be underſtood by a bare deſcription, or even a repreſentation in a draught, ſo well as any perſon may have any idea of by taking off the face or dial-plate of a late-made eight-day clock; for within twenty years paſt, great improvements have been made in this part of the mechaniſm.

To the invention of Mr. Maurice Wheeler, we owe the curious contrivance of a clock deſcending on an inclined plane, the theory of which is very curious, and may be ſeen in N°. 161 of the Philoſophical Tranſactions; alſo the clock

clock itſelf may be ſeen in don Saltero's coffee-houſe at Chelſea. How a clock may be made to aſcend on an inclined plane, has been the contrivance of M. de Gennes. See Philoſophical Tranſactions, N°. 140.

Water-CLOCK, clepſydra. See the article CLEPSYDRA.

CLOGHER, a city and biſhop's ſee of Ireland, in the county of Tyrone, and province of Ulſter, ſituated twelve miles weſt of Armagh; weſt longitude 7° 30′, north latitude 54° 16′.

CLOGS, a kind of wooden pattens without rings.

The term clogs is alſo uſed for pieces of wood faſtened about the necks or legs of beaſts, to prevent their running away.

CLOISTER, *clauſtrum*, an habitation ſurrounded with walls, and inhabited by religious.

In a more general ſenſe it is uſed for a monaſtery of religious of either ſex. In the firſt ſenſe, it is the principal part of a regular monaſtery, being a ſquare ſurrounded with walls or buildings. It is commonly placed between the church, the chapter-houſe, and refectory, underneath the dormitory.

The cloiſters, in antient monaſteries, ſerved for ſeveral purpoſes: it was here the monks held their lectures; the lectures of morality at the north ſide, next the church; the ſchool on the weſt; and the chapter on the eaſt: ſpiritual meditations, *&c.* being reſerved for the church.

CLOSE, in heraldry. When any bird is drawn in a coat of arms with its wings cloſe down about it (*i. e.* not diſplayed) and in a ſtanding poſture, they blazon it by this word *cloſe*; but if it be flying, they call it volant. See VOLANT.

CLOSE *behind*, in the manege, a horſe whoſe hoofs come too cloſe together: ſuch horſes are commonly good ones.

To cloſe a paſſade juſtly, is when the horſe ends the paſſade with a demivolt in good order, well narrowed and rounded, and terminating upon the ſame line upon which he parted, ſo that he is ſtill in a condition to part from the hand handſomely, at the very laſt time or motion of his demivolt.

CLOSE, in muſic. See CADENCE.

CLOSE-FIELD. See the article FIELD.

CLOSE-FIGHTS, in the ſea-language, ſuch bulk-heads as are in a cloſe fight put up fore and aft in a ſhip, for the men to ſtand behind them ſecure, and fire upon the enemy; and if the ſhip is boarded, to ſecure and clear the decks.

CLOSE-FIRE. See REVERBERATION.

Pound CLOSE. See the article POUND.

CLOSE-QUARTERS. See QUARTERS.

CLOSET, in building, denotes a very ſmall room, generally without any chimney: it is eſteemed one great improvement of our modern architects.

CLOSET, in heraldry, denotes the half of a bar. See the article BAR.

Clerk of the CLOSET, a chaplain who aſſiſts the king in his private devotions.

CLOSH, an unlawful game forbidden by ſtat. 14. Edward IV. cap. 3 and 33. and Henry VIII. cap. 9. It is ſaid to have been much the ſame with our nine-pins.

CLOT-BIRD, the ſame with the oenanthe of ornithologiſts. See OENANTHE.

CLOTH, in commerce, a manufacture made of wool wove on the loom.

The term is applicable alſo to other manufactures made of hemp, flax, *&c.* but in a more particular ſenſe it implies the web or tiſſue of woolen threads interwoven, ſome whereof, called the warp, are extended in length from one end of the piece to the other: the reſt, called the woof, diſpoſed acroſs the firſt, or breadth-wiſe of the piece.

Cloths are of divers qualities, fine or coarſe. The goodneſs of cloth, according to ſome, conſiſts in the following particulars. 1. That the wool be of a good quality, and well dreſſed. 2. It muſt be equally ſpun, carefully obſerving that the thread of the warp be finer and better twiſted than that of the woof. 3. The cloth muſt be well wrought and beaten on the loom, ſo as to be every where equally compact. 4. The wool muſt not be finer at one end of the piece than in the reſt. 5. The liſts muſt be ſufficiently ſtrong, of the ſame length with the ſtuff, and muſt conſiſt of good wool, hair, or oſtrich-feathers; or, what is ſtill better, of daniſh dog's hair. 6. The cloth muſt be free from knots, and other imperfections. 7. It muſt be well ſcoured with fuller's earth, well fulled with the beſt white ſoap, and afterwards waſhed in clear water. 8. The hair or nap muſt be well drawn out with the teazel, without being too much opened. 9. It muſt be ſhorn cloſe without making it thread-bare. 10. It muſt be well dried. 11. It muſt not be tenter-ſtretched, to force it to its juſt dimenſions. 12. It muſt be

preſſed

preſſed cold, not hot preſſed, the latter being very injurious to woolen cloth.

Manufacturing of white cloths which are intended for dying.

The beſt wool for the manufacturing of cloths are thoſe of England and Spain, eſpecially thoſe of Lincolnſhire and Segovia. To uſe thoſe wools to the beſt advantage, they muſt be ſcoured, by putting them into a liquor ſomewhat more than lukewarm, compoſed of three parts fair water, and one of urine. After the wool has continued long enough in the liquor to ſoak, and diſſolve the greaſe, it is drained and well waſhed in running water. When it feels dry, and has no ſmell but the natural one of the ſheep, it is ſaid to be duly ſcoured.

After this it is hung to dry in the ſhade, the heat of the ſun making it harſh and inflexible: when dry, it is beat with rods upon hurdles of wood, or on cords, to cleanſe it from duſt, and the groſſer filth; the more it is thus beat and cleanſed, the ſofter it becomes, and the better for ſpinning. After beating, it muſt be well picked, to free it from the reſt of the filth that had eſcaped the rods.

It is now in a proper condition to be oiled, and carded on large iron cards, placed ſlopewiſe. Olive oil is eſteemed the beſt for this purpoſe: one fifth of which ſhould be uſed for the wool intended for the woof, and a ninth for that deſigned for the warp. After the wool has been well oiled, it is given to the ſpinners, who firſt card it on the knee with the ſmall fine cards, and then ſpin it on the wheel, obſerving to make the thread of the warp ſmaller by one third than that of the woof, and much compacter twiſted.

The thread thus ſpun, reeled, and made into ſkeins, that deſigned for the woof is wound on little tubes, pieces of paper, or ruſhes, ſo diſpoſed, as that they may be eaſily put in the eye of the ſhuttle. That for the warp is wound on a kind of large wooden bobbins, to diſpoſe it for warping. When warped, it is ſtiffened with ſize, the beſt of which is that made of ſhreds of parchment, and when dry, is given to the weavers, who mount it on the loom.

The warp thus mounted, the weavers, who are two to each loom, one on each ſide, tread alternately on the treddle, firſt on the right ſtep, and then on the left, which raiſes and lowers the threads of the warp equally; between which they throw tranſverſely the ſhuttle from the one to the other: and every time that the ſhuttle is thus thrown, and a thread of the woof inſerted within the warp, they ſtrike it conjunctly with the ſame frame, wherein is faſtened the comb or reed, between whoſe teeth the threads of the warp are paſſed, repeating the ſtroke as often as is neceſſary.

The weavers having continued their work till the whole warp is filled with the woof, the cloth is finiſhed; it is then taken off the loom by unrolling it from the beam whereon it had been rolled in proportion as it was wove; and now given to be cleanſed of the knots, ends of threads, ſtraws, and other filth, which is done with iron-nippers.

In this condition it is carried to the fullery, to be ſcoured with urine, or a kind of potter's clay, well ſteeped in water, put along with the cloth in the trough wherein it is fulled. The cloth being again cleared from the earth or urine, is returned to the former hands to have the leſſer filth, ſmall ſtraws, *&c.* taken off as before: then it is returned to the fuller to be beat and fulled with hot water, wherein a ſuitable quantity of ſoap has been diſſolved; after fulling, it is taken out to be ſmoothed, or pulled by the liſts lengthwiſe, to take out the wrinkles, crevices, *&c.*

The ſmoothing is repeated every two hours, till the fulling be finiſhed, and the cloth brought to its proper breadth: after which it is waſhed in clear water, to purge it of the ſoap, and given wet to the carders to raiſe the hair or nap on the right ſide with the thiſtle or weed. After this preparation, the cloth-worker takes the cloth, and gives it its firſt cut or ſheering: then the carders reſume it, and after wetting, give it as many more courſes with the teazle, as the quality of the ſtuff requires, always obſerving to begin againſt the grain of the hair, and to end with it; as alſo to begin with a ſmoother thiſtle, proceeding ſtill with one ſharper and ſharper, as far as the ſixth degree.

After theſe operations, the cloth being dried, is returned to the cloth-worker, who ſheers it a ſecond time, and returns it to the carders, who repeat their operation as before, till the nap be well ranged on the ſurface of the cloth, from one end of the piece to the other.

The cloth thus wove, ſcoured, napped and ſhorn, is ſent to the dyer; when dyed,

dyed, 'tis waſhed in fair water, and the worker takes it again wet as it is, lays the nap with a bruſh on the table, and hangs it on the tenters, where it is ſtretched both in length and breadth ſufficiently to ſmooth it, ſet it ſquare, and bring it to its proper dimenſions, without ſtraining it too much; obſerving to bruſh it afreſh, the way of the nap, while a little moiſt, on the tenters.

When quite dry, the cloth is taken off the tenters and bruſhed again on the table, to finiſh the laying of the nap; after which it is folded, and laid cold under a preſs, to make it perfectly ſmooth and even, and give it a gloſs.

Laſtly, the cloth being taken out of the preſs, and the papers, &c. for gloſſing it removed, it is in a condition for ſale or uſe.

With regard to the manufacture of mixt cloths, or thoſe wherein the wools are firſt dyed, and then mixt, ſpun and wove of the colours intended, the proceſs, except what relates to the colour, is moſtly the ſame with that juſt repreſented.

CLOUD, in phyſiology, a collection of vapours ſuſpended in the atmoſphere; being a congeries chiefly of watry particles, drawn up from the ſea and land by the ſolar or ſubterraneous heat, or both, in vapour; though ſome attribute the riſe of the vapours to electricity. See the article ELECTRICITY.

If the water that is floating about in the air mounts higher and higher, its particles at length arrive in places ſo far above the earth, that they are not any longer much united together, but receding from each other, they do not conſtitute water, but only the elements of it: yet when thoſe elements of water come to deſcend from the upper regions, and are contracted into ſmaller ſpaces, where they aſſociate together and become water, they then form clouds; their denſity is firſt augmented, ſo as to render them opaque enough to reflect the ſun's light, and become viſible; and their ſpecific gravity being increaſed, makes them deſcend in rain.

Clouds, beſides their uſe, when they deſcend in ſhowers, are of ſervice while ſuſpended in the atmoſphere, as they help to mitigate the exceſſive heat of the torrid zone, and ſcreen it from the beams of the ſun, eſpecially when in the zenith. See VAPOUR and ATMOSPHERE.

Boerhaave is of opinion, that ſnowy or icy clouds are frequently ſo diſpoſed in the atmoſphere, as to form reflecting ſpeculums; from whence the ſun's rays being repelled, and collected in vaſt focuſes, occaſion the many deſtructive effects attributed to the bad ſtate of the air.

CLOUDBERRY, in botany, the engliſh name of the chamæmorus, a ſpecies of rubus. See the article RUBUS.

CLOVE-TREE, in botany, the engliſh name of the caryophyllus aromaticus of botaniſts. See CARYOPHYLLUS.

CLOVE, a term uſed in weights of wool. Seven pounds make a clove.

In Eſſex, eight pounds of cheeſe and butter go to the clove.

CLOVER-GRASS is eſteemed the principal of graſs, on account of its excellency for feeding cattle. The beſt ſeed is like that of muſtard, only it is rather oblong than round, of a greeniſh yellow colour, and ſome of it a little reddiſh. A rich, light, dry land, is the moſt proper for it.

CLOUGH, or DRAUGHT, among traders, an allowance of two pounds to every three hundred weight, for the turn of the ſcale, that the commodity may hold out when ſold by retail.

CLOUTS, in military affairs, are thin plates of iron nailed on that part of the axletree of a gun's carriage, which comes through the nave, through which the linſ-pin goes.

CLOYED, in the ſea-language, is ſaid of a great gun, the touch-hole of which is ſtopped up.

CLOYNE, a city and biſhop's ſee of Ireland, in the county of Cork, and province of Munſter, about fifteen miles eaſt of Cork: weſt long. 8°, north lat. 51° 40'.

CLUPEA, in ichthyology, a genus of malacopterygious fiſhes, the characters of which are theſe: the branchioſtege membrane contains eight ſmall bones; and the abdomen is acute and ſerrated.

To this genus belong the herring, ſhad, anchovy, and ſprat. See the articles HERRING, SHAD, &c.

CLUSIA, in botany, a genus of the polyandria-monogynia claſs of plants, the flower of which conſiſts of five large, roundiſh, patent, concave petals: the fruit is an ovated capſule, with ſix furrows, having ſix valves and ſix cells, containing numerous ovated ſeeds, covered with a pulp.

CLUTIA, in botany, a genus of the dioecia-gynandria claſs of plants, the male flower of which conſiſts of five patent, cordated petals: the female flower has perſiſtent petals, as in the male: the fruit

is a globoſe, ſcabrous capſule, with ſix furrows, and three cells, containing ſolitary, roundiſh, clear ſeeds.

CLYDE, a river of Scotland, which, ariſing in Annandale, runs north-weſt by Lanerk, Hamilton, and Glaſgow, and falls into the frith of Clyde, over-againſt the iſle of Bute.

CLYPEOLA, in botany, a genus of the tetradynamia-ſiliculoſa claſs of plants, the flower of which conſiſts of four petals of the form of a croſs: the fruit is an orbiculated, plano-compreſſed, erect pod, with two valves, containing orbiculated ſeeds in the center of the pericarpium.

CLYPEUS, or CLYPEUM, a ſhield or buckler. See the article SHIELD.

CLYSSUS, in chemiſtry, an extract prepared not from one but ſeveral bodies mixt together; and among the moderns, the term is applied to ſeveral extracts procured from the ſame body, and then mixed together. Thus, if from wormwood we draw the water, ſpirit, oil, ſalt, and tincture, and according to the rules of art re-unite theſe into a maſs compounded of them all, and containing the joint virtues of all, we have a clyſſus of wormwood. To this claſs are reducible many of the nobleſt productions of chemiſtry, as the more curious ſapas, and an infinite number of others.

CLYSSUS *of antimony*, is a liquor obtained by diſtillation from a mixture of antimony, nitre and ſulphur. It is preſcribed to feveriſh patients, in order to procure a grateful acidity to their potions, and to ſuch as labour under a loſs of appetite.

CLYSTER, is a liquid remedy to be injected chiefly at the anus into the larger inteſtines. It is uſually adminiſtered by the bladder of a hog, ſheep, or ox, perforated at each end, and having at one of the apertures an ivory pipe faſtened with packthread. But the French, and ſometimes the Dutch, uſe a pewter ſyringe, by which the liquor may be drawn in with more eaſe and expedition than in the bladder, and likewiſe more forcibly expelled into the large inteſtines. This remedy ſhould never be adminiſtered either too hot or too cold, but tepid; for either of the former will be injurious to the bowels.

Clyſters are prepared of different ingredients, according to the different intentions propoſed, whether to ſoften the indurated faeces, correct the acrid, acid and ſaline recrements, evacuate the contents of the large inteſtines, corroborate the languid fibres of the inteſtines, and augment their impaired periſtaltic motion; to mitigate the ſpaſms of the inteſtinal coats, and relax their conſtricted fibres; to cauſe a revulſion downwards in lethargic diſorders, apoplexies, frenzies, and other diſorders of the head; to promote labour, whether the fœtus be living or dead; and to expel the ſecundines where they are preternaturally detained.

Clyſters are ſometimes uſed to nouriſh and ſupport a patient who can ſwallow little or no aliment, by reaſon of ſome impediment in the organs of deglutition. In which caſes they may be made of broth, milk, ale, and decoctions of barley and oats with wine. The Engliſh introduced a new kind of clyſter, made of the ſmoke of tobacco, which has been uſed by ſeveral other nations, and appears to be of conſiderable efficacy when other clyſters prove ineffectual, and particularly in the iliac paſſion, and in the *hernia incarcerata*, though it may likewiſe be uſed in an obſtinate conſtipation or obſtruction of the bowels, *&c.* See Heiſter's ſurgery, and Graſſius's and Sawzonius's diſſertation upon the ſubject, publiſhed in the year 1691.

CNEMODACTYLÆUS, in anatomy, a name by which ſome call one of the extenſor muſcles of the fingers. See the article EXTENSOR.

CNEORUM, in botany, a genus of the triandria-monogynia claſs of plants: the flower conſiſts of three oblong, lanceolato-linear, concave, erect, deciduous petals: the fruit is a dry, globoſe, trilobular and trilocular berry, containing ſolitary roundiſh ſeeds.

CNICUS, SAFFRON-FLOWER, in botany, a genus of the ſyngeneſia-polygamia-ſruſtranea claſs of plants: the compound flower is floſculous, diſform, and tubulous; the proper hermaphrodite one, infundibuliform and oblong; and the female one of a funnel-form alſo, but ſlenderer and longer: the calyx of the hermaphrodite contains ſolitary ſeeds, crowned with down: the females prove abortive. See place XLIV. fig. 1.

COACH, a commodious vehicle for travelling, ſo well known as to need no deſcription. Their invention was owing to the French about the reign of Francis I. They have, like other things, been brought to their preſent perfection by degrees: at preſent they ſeem to want nothing, either with regard to eaſe or magnificence. Lewis XIV. of France, made

made divers ſumptuary laws for reſtraining the exceſſive richneſs of coaches, prohibiting the uſe of gold and ſilver therein, but they have been neglected. In England, and moſt parts of Europe, the coaches are drawn by horſes, except in Spain, where they uſe mules. In a part of the Eaſt, eſpecially the dominions of the great mogul, the coaches are drawn by oxen: in Denmark, they ſometimes uſe rein-deer; but this is rather for curioſity than uſe. The coachman is ordinarily placed on a ſeat raiſed before the body of the coach; but the ſpaniſh policy has diſplaced him in that country by a royal ordinance on occaſion of the duke of Olivarez, who found that a very important ſecret had been diſcovered and revealed by his coachman. Since which time the place of the ſpaniſh coachman, is the ſame with that of the french ſtage-coachman, and our poſtillion.

Coaches are diſtinguiſhed with regard to their ſtructure into coaches, properly ſo called, landaus, chariots, berlins, calaſhes, &c. With regard to the circumſtances of their uſe, we diſtinguiſh them into ſtage-coaches and hackney-coaches. Hackney coaches, are thoſe expoſed to hire in the ſtreets of great cities, at rates fixed by authority. In London and Weſtminſter, eight hundred.

Hackney-COACHES are allowed by ſtatute, and theſe muſt be licenſed by commiſſioners, and pay a duty to the crown. Any perſon driving any ſuch coach without licence, forfeits 5 l. The fare of coaches is 10 s. a day, 1 s. 6 d. for the firſt hour, and 1 s. every hour after; or 1 s. for a mile and four furlongs, and 1 s. 6 d. for two miles.

There are certain places and diſtances mentioned in the act for the extent of the reſpective fares, and others rated by the commiſſioners; and coachmen refuſing to go for their fare, are liable to penalties; as alſo for not having numbers to their coaches.

Stage-COACHES are thoſe appointed for the conveyance of travellers from one city or town to another.

COADJUTOR, is properly uſed for a prelate joined to another to aſſiſt him in the diſcharge of his function, and even in virtue thereof to ſucceed him.

Coadjutors were formerly appointed by kings for archbiſhops and biſhops grown old, or abſent, and not able to adminiſter in their diocele. But the right of appointing coadjutors in the romiſh countries, is now reſerved to the pope alone. The popes formerly made a ſhameful abuſe of the coadjutories: ſome they granted to children; others, to people not in orders; others, to perſons at a diſtance: but the council of Trent tied down the pope's hands, by adding abundance of reſtrictions on this article. In nunneries, they have coadjutrixes, who are religious nominated to ſucceed the abbeſs, under pretence of aiding her in the diſcharge of her office.

COAGMENTATION, among chemiſts, is the melting any body by caſting in certain powders, and afterwards letting the whole concrete into a ſolid.

COAGULATION, in a general ſenſe, imports a certain change in the ſtate of any liquor, by means of which, inſtead of retaining its fluidity, it becomes more or leſs conſiſtent, according to the degree of coagulation.

Apothecaries coagulate fluids in various manners, by evaporation, for inſtance, or diſtillation; and this ſpecies is called by chemiſts *coagulatio per ſegregationem*, or *per ſeparationem*.

COAGULATION, *per comprehenſionem*, in chemiſtry, is when the whole of the fluid, without the loſs of any of its parts, is coagulated into an uniform ſubſtance. This is performed, 1. With water, by congealing, cryſtallizing, and precipitating, as in the mercurius vitæ. 2. With oil, which by force of fire unites to itſelf ſulphur, ſalts, and metals. 3. With alcohol, upon the volatile ſpirit of ſal armoniac, the white of eggs, the ſerum of the blood, and oil of vitriol. 4. With alcali and acid, growing ſolid together, as particularly in the tartar of vitriol. 5. With fixed alcali, as in milk. 6. With acid ſalts, as in milk, ſerum, and white of eggs.

COAGULUM, is the ſame with what in engliſh we call rennet, or rather the curd formed thereby. See RENNET.

COAGULUM ALUMENOSUM, in pharmacy, is made by ſtirring any quantity of whites of eggs with a piece of alum of a proper ſize in a tin-veſſel, till they are coagulated; ſaid to be good in defluxions of the eyes.

COAL, or PIT-COAL, *lithanthrax*, in natural hiſtory. See LITHANTHRAX.

Cannel COAL, *ampelites*, in natural hiſtory. See the article AMPELITES.

Small-COAL, a ſort of charcoal prepared from the ſpray and bruſh-wood ſtripped off

off from the branches of coppice-wood, ſometimes bound in bavins for that purpoſe, and ſometimes charred without binding, and then it is called coming it together.

The wood they diſpoſe on a level floor, and ſetting a portion of it on fire, they throw on more and more as faſt as it kindles, whence ariſes a ſudden blaze, till all be burnt that was near the place. As ſoon as all the wood is thrown on, they caſt water on the heap from a large ſcoop, and thus keep plying the heap of glowing coals, which ſtops the fury of the fire; while with a rake they ſpread it open, and turn it with ſhovels, till no more fire appears. Then they ſhovel them up into great heaps, and when thoroughly cold, put them up in ſacks, to be uſed by families for kindling their fires, and by divers artificers, to temper and anneal their ſeveral works.

Char-COAL. See the article CHAR-COAL.

COAL-FISH. See the article COLE-FISH.

COALITION, the re-union of the parts of a body, before ſeparated. See the article CONGLUTINATION.

COAMINGS, in ſhip-building, are thoſe planks which raiſe up the hatches higher than the reſt of the deck, in which loop-holes for muſkets to ſhoot out are uſually made, in order to clear the deck when the ſhip is boarded by an enemy.

COAST, that part of a country next the ſea-ſhore. See SEA and SHORE.

COASTEMARY, or COSTEMARY, in botany. See the article COSTEMARY.

COASTING, that part of navigation where the places aſſigned are not far diſtant, ſo that a ſhip may ſail in ſight of land, or within ſoundings, between them. In this there is only required a good knowledge of the land, the uſe of the compaſs and lead, or ſounding line.

COASTING, in agriculture, denotes the tranſplanting a tree, and placing it in the ſame ſituation with reſpect to eaſt, weſt, ſouth and north, as it ſtood in before it was tranſplanted.

COAT, or COAT of ARMS, in heraldry, a habit worn by the antient knights over their arms both in war and tournaments, and ſtill borne by heralds at arms. It was a kind of fur-coat, reaching as low as the navel, open at the ſides with ſhort ſleeves, ſometimes furred with ermine and hair, upon which were applied the armories of the knights embroidered in gold and ſilver, and enamelled with beaten tin-coloured black, green, red and blue; whence the rule never to apply colour on colour, nor metal on metal. The coats of arms were frequently open, and diverſified with bands and fillets of ſeveral colours, alternately placed, as we ſtill ſee cloths, ſcarleted, watered, &c. Hence they were called deviſes, as being divided and compoſed of ſeveral pieces ſewed together; whence the words, *falſe*, *pale*, *chevron*, *bend*, *croſs*, *faltier*, *lozenge*, &c. which have ſince become honourable pieces or ordinaries of the ſhield. See the articles CROSS, BEND, CHEVRON, &c.

Coats of arms and banners were never allowed to be worn by any but knights and antient nobles.

COAT, in anatomy. See the articles TUNICA and EYE.

COAT *of* MAIL. See the article MAIL.

COATS, in a ſhip, are pieces of tarred canvaſs put about the maſts at the partners to keep out water. They are alſo uſed at the rudder's head, and about the pumps at the decks, that no water may go down there.

COATING, in chemiſtry, the ſame with lorication. See LORICATION.

COBALT, *cobaltum*, a genus of foſſils, of the order of the aſphurelata: it is a denſe, compact, and ponderous mineral, very bright and ſhining, and much reſembling ſome of the antimonial ores. See the article ANTIMONY.

It is ſometimes found of a deep bluiſh-black, very heavy and hard, and of a granulated ſtructure, looking like a piece of pure iron where freſh broken: at other times, it is found more compact, not granulated, but reſembling a maſs of melted lead on the ſurface. Theſe are the more ordinary appearances of cobalt, beſides which there are other accidental varieties of it, being ſometimes found of a florid red, or a red debaſed by mixtures of grey, black or yellow; and in this ſtate, it either forms an uniform maſs, or a beautifully ſtriated and ridged one.

From this mineral are produced the ſeveral kinds of arſenic, zaffre, and ſmalt. See the articles ARSENIC, ZAFFRE, &c.

COBALT is alſo uſed to denote the damps of mines, ſo very fatal to the workmen. See the article DAMP.

COBITIS, in ichthyology, a genus of malacopterygious fiſhes, with only five ſmall bones in the branchioſtege membrane, the firſt of which is broadeſt; there are alſo cirri at the mouth: the body is ſpotted, and the back fin and thoſe of the belly

belly are at the ſame diſtance from the extremity of the head. There are three ſpecies of this fiſh, the ſmooth ſpotted cobitis, with the body ſomewhat rounded, or the loache; the cobitis, with a bifurcated ſpine under each eye, or the bearded loache; and the blue cobitis, with five longitudinal black lines on each ſide, or the foſſile muſtela: theſe ſpecies are from three to five inches in length, and from half an inch to one inch in thickneſs. See LOACHE and MUSTELA.

COBLENTZ, CONFLUENTIA, a large city of Germany, in the archbiſhopric of Triers, and circle of the lower Rhine, ſituated at the confluence of the Rhine and Moſelle, fifty-two miles north-eaſt of Triers, and thirty-ſix ſouth of Cologne: eaſt longitude 7° 15′, north latitude 50° 30′.

COBLON, a port-town of the hither India, ſituated on the Coromandel coaſt, twelve miles ſouth of Fort St. George: eaſt longitude 80°, north latitude 12° 50′.

COBWEB, in phyſiology, the fine network which ſpiders ſpin out of their own bowels, in order to catch their prey. Dried and powdered cobwebs are ſaid to be a good aſtringent and abſorbent.

COCCIFEROUS PLANTS, the ſame with bacciferous. See BACCIFEROUS.

COCCINELLA, in zoology, a genus of inſects, of the coleoptera order, called by Dr. Hill hemiſphæria, the characters of which are theſe: the antennæ are clavated and entire; and the thorax, with the exterior wings, which are marginated, conſtitutes an hemiſpherical figure.

Of this genus there are a great many ſpecies. 1. The coccinella with red wings, and only two black ſpots on them. 2. The coccinella with red wings, variegated with longitudinal white lines and ſpots. 3. The coccinella with red wings, and ſeven black ſpots on them: this ſpecies is very common with us, and is called the lady-cow. 4. The coccinella with yellow wings. 5. The coccinella with black wings, &c. of each of which there are ſeveral varieties, diſtinguiſhed by their different ſpots.

COCCOTHRAUSTES, the GROSS-BEAK, or HAW-FINCH, in ornithology, a ſpecies of loxia, diſtinguiſhed by having a double line of white on the wings. See the article LOXIA.

It feeds on the kernels in the ſtones of fruits, which it breaks with great dexterity, whence its name of coccothrauſtes. The *virginian coccothrauſtes* is a bird about the ſize of a black-bird, diſtinguiſhed from the former ſpecies by its creſt, and beautiful ſcarlet-colour.

COCCUS, in zoology, a genus of two-winged inſects, the wings of which ſtand erect, and are only to be found in the males: add to this, that the roſtrum, or trunk, ariſes from the breaſt, and the body is ſetoſe behind.

To this genus belong, 1. The purple coccus of the roots of plants, called by ſome german cochineal: it dyes a beautiful ſcarlet colour. 2. The kermes or coccus of the ilex. 3. The coccus of inſects. 4. The cochineal-inſect, or coccus of the tuna: with ſeveral other ſpecies. See the articles KERMES and COCHINEAL.

COCCYGÆUS MUSCULUS, in anatomy, a name ſometimes uſed for the ſphincter of the anus. See the article SPHINCTER.

COCCYX, or COCCYGIS OS, in anatomy, a bone ſituated at the extremity of the os ſacrum. See the article OSTEOLOGY.

The figure of it is ſomething like that of an inverted pyramid, a little bent forward towards the pelvis: in adults it is uſually of a ſingle bone; but in younger ſubjects in conſiſts of three or four fruſtæ, and in infants it is merely cartilaginous. In quadrupeds of many kinds, this bone is long, compoſed of a number of fruſtæ, is bent forward, and conſtitutes the tail; in this caſe it is called the os caudæ.

COCHIA, in pharmacy, a name for certain officinal pills, as the greater pill cochiæ and the leſſer pill cochiæ: the former is a compoſition taken from Rhaſes, and hardly ever uſed in the preſent practice; the latter, being the moſt in uſe of any under this claſs, is compounded of equal quantities of bright aloes, the pureſt ſcammony, and the pulp of colocynth, which are made into a maſs with a ſufficient quantity of ſyrup of buckthorn, adding thereto two drams of the diſtilled oil of cloves. They are preſcribed to diſcuſs viſcidities, watry humours, and flatulencies.

COCHIN, a port-town of India, on the Malabar coaſt, about one hundred miles ſouth of Calicut: weſt longitude 75°, and north latitude 9° 30′.

Here the Dutch have a factory, and a very ſtrong fort.

COCHIN-CHINA, a kingdom of India, ſituated between 104° and 109° eaſt longitude, and between 10° and 17° north latitude; being bounded by the kingdom of Tonquin on the north, by the indian

ocean on the east and south, and by the kingdom of Cambodia on the west: it is upwards of four hundred miles long, and one hundred and fifty broad, producing chiefly silk and rice.

COCHINEAL, or COCHINEEL, in commerce, was, till of late, supposed to be a vegetable production, a seed, or an excrescence of a plant; but is now acknowledged to be the female of a species of coccus, called the coccus of the tuna, from its living on the tuna opuntia, or indian fig. See the article COCCUS.

There are two sorts of it, the mestique, which is esteemed the finest, and the wild, which is less valuable; the difference being occasioned only by the extraordinary care that is taken of the one by being supplied with food of a proper kind, the other living wild without the like care.

It is brought from Mexico, and some other parts of South America, where the inhabitants find it so very advantageous an article of commerce, that they make plantations of the opuntia, and regularly breed and manage their crops, sending such vast quantities of it to Europe, that it is computed there is no less than eight or nine hundred thousand weight annually imported from spanish America.

With us it pays no duty; and is esteemed a great cordial, sudorific, alexipharmic, and febrifuge; and much used by dyers and painters, the high crimson colour it affords being scarce equalled by any thing, and making, according to their different management of it, all the degrees and kinds of red.

COCHLEA, the SNAIL-SHELL, in zoology, a genus of univalve shell-fish, of a spiral figure, and containing only one cell. This is a very comprehensive genus, and therefore subdivided into three series, *viz.* 1. The cochleæ which have a round or nearly round mouth, called cochleæ lunares. 2. The cochleæ with a semicircular mouth, called cochleæ semilunares. 3. The cochleæ with a narrow oval mouth, as if the sides were crushed together, called cochleæ depressæ. See plate XLIV. fig. 2.

COCHLEA, in anatomy, the third part of the labyrinth of the ear. See EAR.

It is placed opposite to the semicircular canals, and formed in the manner of a snail-shell, making its progress two turns and a half, in a spiral form. In this we are to remark the nucleus, and the canal, which is divided into two by a spiral lamina; the upper of these opens into the vestibulum, and is called scala vestibuli; and the lower, which terminates in the hollow of the tympanum, through the fenestra rotunda, is called scala tympani.

COCHLEA, the SCREW, in mechanics. See the article SCREW.

COCHLEARIA, SCURVY-GRASS, in botany, a genus of the tetradynamia-siliculosa class of plants, the flower of which consists of four vertically ovated petals, of the form of a cross; the fruit is a subcordated, lightly compressed, scabrous, bilocular pod, containing about four seeds in each cell.

It is heating, drying, and aperitive, of great use against the scurvy, dropsy, and jaundice; and is often put into diet-drinks for those purposes; it must be remembered, however, that scurvy-grass, and such warm plants, are only proper in an acid scurvy, being very pernicious in a putrid alcaline scurvy.

COCK, *gallus*, in zoology, the english name of the males of gallinaceous birds, but more especially used for the common dunghill-cock. See the article GALLUS.

Game COCK. See GAME COCK.

Gor-COCK. See the article GOR-COCK.

Indian-COCK, *crax*. See CRAX.

Wood-COCK. See the article WOOD-COCK.

COCK-BOATS, among sailors, those used only in rivers, or near the shore.

COCK'S COMB, in botany, a name given to a species of pedicularis, as well as to a species of amaranth. See the articles PEDICULARIS and AMARANTH.

COCK-PIT, a sort of theatre upon which game cocks fight.

COCK-PIT, in a man of war, a place on the lower floor, or deck, abaft the main-capstan, lying between the platform and the steward's room, where are partitions for the purser, surgeon, and his mates.

COCK-SWAIN, or COXSON, an officer on board a man of war, who has the care of the barge and all things belonging to it, and must be also ready with his crew to man the boat on all occasions: he sits at the stern of the boat, and steers.

COCK-WATER, among miners, a stream of water, brought into a trough, to wash away the sand from tin-ore, while stamping in the middle.

COCKS, on ship-board, are little square pieces of brass, with holes in them, put into wooden shivers, to keep them from splitting and galling by the pin of the block.

COCKERMOUTH, a borough-town of Cum-

Cumberland, ſituated on the river Derwent, near the iriſh ſea, about twenty-five miles ſouth-weſt of Carliſle: weſt long. 3° 10′, and north lat. 54° 35′.

It ſends two members to parliament.

COCKET is a ſeal belonging to the king's cuſtom houſe, or rather a ſcroll of parchment ſealed and delivered by the officers of the cuſtoms to merchants, as a warrant that their merchandiſes are cuſtomed.

It is alſo uſed for the office where goods, tranſported, were firſt entered, and paid their cuſtom, and had a cocket or certificate of diſcharge.

COCOA, or CACAO, in botany, the ſame with the theobroma of Linnæus. See the article THEOBROMA.

COCONATO, a town of Italy, in the province of Piedmont, about twenty miles eaſt of Turin; it is ſaid to be the birth-place of the famous Columbus, who diſcovered America: eaſt long. 8°, and north lat. 44° 50°.

COCOS, the COCO, in botany, a genus of plants, the characters of which are not perfectly aſcertained. There are male, hermaphrodite flowers, and female ones, diſtinct on the ſeveral parts of the ſame ſpadix; the general ſpatha is compoſite, and the ſpadix ramoſe. In the hermaphrodite flowers, the corolla is divided into three oval, acute ſegments; the ſtamina are ſix ſimple filaments, of the length of the corolla. The female flower has the corolla very minute, but divided alſo into three ſegments; the fruit is large, coriaceous, round, and obtuſely trigonal; the ſeed is a large nut, of an oval figure, acuminated, formed of three valves, obtuſely trigonal, and marked with three holes at the baſe.

The ſhell of the coco nut is much uſed by turners, carvers, &c. for divers works. While the nuts are new, and the bark tender, they yield each about half a pint of clear cooling water, which in a little time becomes firſt a white ſoft pulp, and at length condenſes, and aſſumes the taſte of the nut. The tree yields fruit thrice a year, and thoſe ſometimes as big as a man's head; but the cocos of the Antilles are not ſo large as thoſe of the Eaſt-Indies. In the kingdom of Siam, the cocos-fruit, dried and emptied of its pulp, ſerves as a meaſure both for things liquid and dry.

COCTION, a general term for all alterations made in bodies by the application of fire or heat: of this there are various ſpecies, as maturation, friction, aſſation, elixation, uſtion, &c. See ASSATION, FRICTION, &c. and alſo the articles CONCOCTION and DECOCTION.

COD, in ichthyology, the engliſh name of the variegated gadus with three fins on the back, a cirrated mouth, and the upper jaw longeſt, called by different authors *aſellus varius* and *aſellus ſtriatus*. See the article GADUS.

This fiſh receives different denominations from the places where it is caught and cured, as haberdeen, from Aberdeen in Scotland; green-fiſh, from Greenland; iceland-fiſh, from Iceland, &c. and it is alſo called ſtock-fiſh, becauſe it requires to be beaten with ſticks before it can be dreſſed.

COD is alſo a term uſed, in ſome parts of the kingdom, for a pod. See POD.

COD-FISHERY. See FISHERY.

COD-CAPE, in geography, a promontory on the coaſt of New-England, near the entrance of Boſton-harbour: weſt long. 69° 50′, and north latitude 42°.

CODA, in the italian muſic, two or three meaſures, which, repeated ſeveral times, at the end of a canon or fugue, ſerve to end the piece.

Coda, in antient compoſitions, is when one part continues on a ſound, which is its cadence, while the others proceed to modulate for four, five, ſix, or more bars.

CODDY-MODDY, in ornithology, the engliſh name of a ſpecies of larus with a grey back and white rump. See the article LARUS.

CODE, *codex*, a collection of the laws and conſtitutions of the roman emperors, made by order of Juſtinian.

The code is accounted the ſecond volume of the civil law, and contains twelve books, the matter of which is nearly the ſame with that of the digeſts, eſpecially the firſt eight books; but the ſtile is neither ſo pure, nor the method ſo accurate as that of the digeſts; and it determines matters of daily uſe, whereas the digeſts diſcuſs the more abſtruſe and ſubtile queſtions of the law, giving the various opinions of the antient lawyers. Although Juſtinian's code is diſtinguiſhed by the appellation of Code, by way of eminence, yet there were codes before his time; ſuch were the gregorian code and hermogenean code, collections of the roman laws made by two famous lawyers, Gregorius and Hermogenes, which included the conſtitutions of the emperors from Adrian to Dioclefian and Maximinus.

sus. 2. The theodosian code, comprised in sixteen books, formed out of the constitutions of the emperors from Constantine the great to Theodosius the younger: this was observed almost over all the west, till it was abrogated by the justinian code. There are also several later codes, particularly the antient gothic, and those of the french kings, as the Code of Euridic, Code-Lewis, Code-Henry, Code-Marchande, Code des Eaux, &c. and the present king of Prussia has lately published a code, which comprizes the laws of his kingdom in a very small volume.

CODEX, in antiquity, denotes a book or tablet, on which the antients wrote.

It was of the bark of a tree, of ivory, of parchment, or of paper.

CODEX was also a log fastened to the foot of a delinquent slave.

CODIA, among botanists, signifies the head of any plant, but more particularly a poppy-head, whence its syrup is called diacodium.

CODICIL is a writing by way of supplement to a will, when any thing is omitted which the testator would have added, or wants to be explained, altered, or recalled. It is of the same nature with a will or testament, except that it is made without an executor; and one may leave behind him but one will, though as many codicils as he pleases. There is this further difference between a codicil and a testament, that a codicil cannot contain the institution of an heir, and is not subject to the same formalities prescribed by law for solemn testaments.

Codicils are always taken as part of the testament, and ought to be annexed to the same; and the executor is bound to see them performed: and in case they are detained from him, he may compel their delivery up, in the spiritual court.

CODLIN, an apple useful in the kitchen, being proper for baking.

CODLING, an appellation given to the codfish, when young. See the article COD.

COECUM, in anatomy, the first of the three large intestines, called, from their size, intestina crassa. The cœcum is situated at the right os ilium, and resembles a bag, and has a vermiform appendage fixed to it. It begins at the termination of the ilium, and terminates in the bottom of the bag which it forms; its length is not more than three or four finger's breadth. In the appendage, opening into the side of the cœcum, there are some glands, which, together with its erect situation, as that is usually the case, seems to shew that some fluid is secreted there. In hens, this is double, as also in many other fowls. In fishes there are frequently a vast number of them; in some species, no less than four hundred, according to Dr. Grew. In man this appendage is, at the utmost, single, and is often wanting. See the articles APPENDICULA and VERMIFORMES.

COEFFICIENTS, in algebra, such numbers, or given quantities, as are put before letters, or unknown quantities, into which letters they are supposed to be multiplied: thus, in $3a$, or bx, or cxx; 3 is the coefficient of $3a$, b of bx, and c of cxx.

When no number is prefixed, unit is supposed to be the coefficient; thus 1 is the coefficient of a or of b.

In a quadratic equation, the coefficient is, according to its sign, either the sum or the difference of its two roots.

In any equation, the coefficient of the second term is always equal to the sum of all the roots, keeping their proper signs.

The coefficient of the third term is the sum of all the rectangles, arising by the multiplication of every two of the roots, how many ways soever these combinations of two can be had, as three times in a cube, six in a biquadratic equation, &c. See the article EQUATION.

The coefficient of the fourth term is the aggregate of all the solids made by the continual multiplication of every three of the roots, how often soever such a ternary may be had, and so on *ad infinitum*.

COEFFICIENTS *of any generating term in fluxions*, is the quantity arising from the division of that term, by the generated quantity.

COELESTIAL, in general, denotes any thing belonging to the heavens: thus we say, cœlestial observations, the cœlestial globe, &c.

Cœlestial observations are those made by astronomers upon the phænomena of the heavenly bodies, with a suitable apparatus of astronomical instruments, in order to determine their places, motions, phases, &c. The instruments chiefly made use of, in astronomical observations, are the astronomical gnomon, quadrant, micrometer, and telescope. See GNOMON, QUADRANT, &c.

Observations in the day-time are easy, in

in regard the croſs-hairs in the focus of the object-glaſs of the teleſcope are then diſtinctly perceivable: in the night, thoſe croſs-hairs are to be illuminated, to make them viſible. This illumination is either performed by a candle placed obliquely near them, ſo as the ſmoke does not intercept the rays; or where this is inconvenient, by making an aperture in the tube of the teleſcope, near the focus of the object-glaſs, through which a candle is applied to illumine the croſs-rays.

Obſervations on the ſun are not to be made without placing a glaſs, ſmoked in the flame of a lamp or candle, between the teleſcope and the eye.

COELESTIAL GLOBE. See GLOBE.

COELIAC ARTERY, in anatomy, that artery which iſſues from the aorta, juſt below the diaphragm.

The trunk of this artery is very ſhort, and near its origin it ſends off from the right ſide two ſmall diaphragmatic branches, ſometimes only one; and is afterwards diſtributed into right and left, communicating with other arteries of the ſame name, which come from the intercoſtal and mammary arteries.

The right branch of this ſends the right gaſtric and epiploic, the pancreatic and the duodenic, the hepatic and the double cyſtic arteries.

The left branch of it ſends off the left gaſtric and epiploic arteries, the gaſtro-epiploic, the great ſplenic, and alſo many of the pancreatic arteries.

COELIAC PASSION, in medicine, a kind of flux, or diarrhœa, wherein the aliments, either wholly changed, or only in part, paſs off by ſtool.

Dr. Freind ſays, that the moſt rational and ſucceſsful method of treating the cœliac paſſion, is to adminiſter ſuch remedies as gently ſtimulate the inteſtinal tube, and deterge the obſtructed glands: for this purpoſe, purges adminiſtered in ſmall quantities, and frequently repeated, and gentle vomits of ipecacuanha are recommended.

Authors frequently confound the cœliac paſſion with the lientery, but they are different. See the article LIENTERY.

COELIAC DIABETES, called alſo cœliaca urinalis, is a diſorder wherein the chyle paſſes off, along with, or inſtead of urine. See the article DIABETES.

COELIAC VEIN, in anatomy, that running through the inteſtinum rectum, along with the cœliac artery.

COELOMA, among phyſicians, a hollow ulcer ſeated in the corner tunics of the eye.

COELUM, HEAVEN. See HEAVEN.

COEMETERY, or CEMETERY, a dormitory or place ſet apart or conſecrated for the burial of the dead. See the article BURIAL, SEPULCHRE, &c.

Antiently none were buried in churches or church-yards: it was even unlawful to inter in cities; inſtead of which they had coemeteries without the walls. Theſe were held in great veneration among the primitive chriſtians. The council of Elvira prohibited the burning of torches or tapers, in the day time, in coemeteries. The practice of conſecrating coemeteries is of ſome antiquity: the biſhop walked round it in proceſſion, with the crozier, or paſtoral ſtaff, in his hand, the holy water-pot being carried before, out of which aſperſions were made. In the early ages, the chriſtians held their aſſemblies in the coemeteries, as we learn from Euſebius and Tertullian, the latter of whom calls thoſe coemeteries where they met to pray, *areæ*. Valerian ſeems to have confiſcated the coemeteries, and places deſtined for divine worſhip, which were reſtored again to the chriſtians by Gallian: in the reſcript of that emperor, which is preſerved by Euſebius, coemeteries and places of worſhip are uſed as ſynonymous terms. It being here the martyrs were buried, the chriſtians choſe thoſe places to have churches in, when leave was given them by Conſtantine to build. And hence ſome derive that rule which ſtill obtains in the church of Rome, never to conſecrate an altar, without putting under it the relicks of ſome ſaint.

COENOBITE, in church-hiſtory, one ſort of monks in the primitive chriſtian church. They were ſo called κατα τον κοινον βιον, from living in common, in which they differed from the anachorites, who retired from ſociety. See ANACHORET.

The cœnobitic life, ſays Caſſian, took its riſe from the times of the apoſtles, and was the ſtate and condition of the firſt chriſtians, according to the deſcription given of them by St. Luke, in the Acts.

Cœnobite, in a modern ſenſe, is a religious who lives in a convent or community, under certain rules.

CO-EQUALITY, among chriſtian divines, a term uſed to denote the equality of the three perſons in the trinity. See the article TRINITY.

The

The orthodox maintain, and the arians deny, this co-equality.

COESFELDT, a town of Germany, in the biſhopric of Munſter and circle of Weſtphalia, ſituated on the river Birket, about twenty-three miles weſt of Munſter: eaſt longitude 6° 40′, and north latitude 51° 50′.

CO-ETERNITY, among chriſtian divines, imports the eternal exiſtence of two or more beings: it is chiefly uſed in ſpeaking of the perſons of the trinity.

COEUR, in heraldry, a ſhort line of partition in pale, in the center of the eſcutcheon, which extends but a little way, much ſhort of the top and bottom, being met by other lines, which form an irregular partition of the eſcutcheon. See plate XLIV. fig. 3.

CO-EXISTENCE, the exiſtence of two or more things at the ſame time.

COFFEA, the COFFEE-TREE, in botany, a genus of the pentandria-monogynia claſs of plants, the flower of which conſiſts of a ſingle petal, of an infundibuliform ſhape; the tube is cylindric and ſlender, many times longer than the cup; the limb is plane, longer than the tube, and divided into five ſegments of a lanceolated figure, with their edges bent backwards; the fruit is a round berry, with an umbilicated point; the ſeeds are two, of an elliptico-hemiſpheric figure, gibboſe on one ſide, plane on the other, and wrapped up in a membrane.

For the virtues and properties of this fruit, ſee the next article.

COFFEE, or COFFEE-BERRIES, the fruit of the coffea. See the preceding article.

We have properly two ſpecies of coffee, the one thicker, heavier, and of a paler colour, brought from Mocha; the other is thinner, and generally of a greeniſh caſt, and is brought us from Grand Cairo in Egypt.

Both kinds have the ſame qualities: neither of them has much ſmell, till roaſted, and both are of a farinaceous, leguminous taſte while raw. Coffee is to be choſen firm, ſolid, and large, not eaſily broken, ſufficiently dry, and of no bad ſmell: what is damp or muſty may be ſometimes reduced to a tolerable taſte in roaſting, if not too far gone, but it is never equal to the more perfect kind.

Coffee was wholly unknown to the Greeks, and even to the arabian writers: the earlieſt knowledge of it is about three hundred and fifty years ſtanding, and it has not been uſed above a third part of that time in Europe. Coffee is rather uſed as a food than as a medicine, yet it is ſo much in every one's way, that is, the liquor made of it, that it is proper for people to know, that it is very drying, and therefore in diſorders of the head, from fumes and too great moiſtures, very ſerviceable by its abſorbent qualities: this they muſt experience, who try it after a debauch of wine, or ſtrong liquors. But in thin and dry conſtitutions it is very hurtful, as it dries the nerves too much, and is apt to make them tremble, as in palſies: by the ſame means it promotes watching, by bracing the fibres too tenſe for that relaxation which is neceſſary for ſleep; though in a caſe of extraordinary defluxion of rheum from the glands about the head and ſtomach, in a cold conſtitution, occaſioning a great hindrance from ſleep, coffee, by abſorbing the ſuperfluous, and continually diſtilling rheum, procures ſleep. The coffee is alſo a ſtomachic and aperient: it is found to aſſiſt digeſtion, and to be good againſt flatuſes; and a cuſtom of drinking it is of great ſervice againſt habitual ſuppreſſions of the menſes: it attenuates and diſſolves the inſpiſſated humours, and always proves diuretic, and ſometimes gently cathartic.

Coffee pays on importation 1 l. 13 s. 6 $\frac{15}{100}$ d. the hundred weight; the drawback on exportation is 1 l. 10 s 2 $\frac{25}{100}$ d. Upon payment of the above duty, the coffee is to be put into warehouſes, and upon delivery from thence, if to be conſumed in Great Britain, is to pay for every hundred weight 3 l. 8 s. if of the britiſh plantations in America, and 11 l. 4 s. if it comes from any other place.

COFFER, a long ſquare box, of the firmeſt timber, about three feet long, and one and an half broad, wherein tin-ore is broken to pieces in a ſtamping-mill.

COFFER, in architecture, a ſmall depreſſion or ſinking of each interval between the modillions of the corinthian cornice: generally filled up with a roſe, ſometimes with a pomegranate, &c.

COFFER, in fortification, a hollow lodgment athwart a dry moat, from ſix to ſeven feet deep, and from ſixteen to eighteen broad, the upper part being made of pieces of timber, raiſed two feet above the level of that moat, which little elevation has hurdles, laden with earth, for its covering, and ſerves as a parapet with embraſures.

The beſieged generally make uſe of theſe coffers

coffers to repulse the besiegers, when they attempt to pass the ditch: they are distinguished only by their length from the caponiers, which are likewise somewhat less in breadth; and it differs from the traverse and gallery, in that these are made by the besiegers, and the coffer by the besieged. To save themselves from the fire of these coffers, the besiegers epaule, or throw up the earth, on that side towards the coffer.

COFFERER *of the king's household*, a principal officer in the court, next under the comptroller, who, in the compting-house, and elsewhere at other times, has a special charge and oversight of other officers of the house, for their good demeanor and charge in their offices, to all which he pays their wages.

COFFIN, in a general sense, a wooden box or trunk, into which the bodies of dead persons are put, in order for burial.

COFFIN, in the manege, the whole hoof of a horse's foot, above the cronet, including the coffin-bone, the sole, and the frush.

COFFIN-BONE is a small spongy bone, inclosed in the midst of the hoof, and possessing the whole form of the foot.

COGITATION, a term used by some for the act of thinking. See THINKING.

COGNATION, in the civil law, a term for that line of consanguinity, which is between males and females, both descended from the same father; as agnation is for the line of parentage between males only descended from the same stock.

In France, for the succession to the crown, they follow agnation; in England, Spain, &c. cognation: women coming to the succession according to the degreee of proximity, in default of males, or their descendants, from branch to branch.

COGNI, the capital of Caramania, in the lesser Asia, antiently called Iconium, about two hundred and fifty miles south-east of Constantinople: east longitude 33°, and north latitude 38°.

COGNISE'E, or CONNUSE'E, in law, is the person to whom a fine of lands, &c. is acknowledged, &c.

COGNISOR, or CONNUSER, is he that passeth or acknowledgeth a fine of lands and tenements to another.

COGNITIONIBUS MITTENDIS, in law, a writ directed to any of the king's justices of the common pleas, who, having a power to take fines, actually takes them, but neglects to certify them, commanding him to certify the same.

COGNIZANCE, or COGNISANCE, in heraldry. See the article CREST.

COGNIZANCE, or CONUSANCE, in law, has divers significations: sometimes it is an acknowledgement of a fine, or confession of something done; sometimes the hearing of a matter judicially, as to take cognizance of a cause; and sometimes a particular jurisdiction, as cognizance of pleas is an authority to call a cause or plea out of another court, which no person can do but the king, except he can shew a charter for it. This cognizance is a privilege granted to a city or town, to hold plea of all contracts, &c. within the liberty; and if any one is impleaded for such matters in the courts at Westminster, the mayor, &c. of such franchise may demand cognizance of the plea, and that it be determined before them.

COGNIZANCE is also used for a badge on a waterman's or serving-man's sleeve, which is commonly the giver's crest, whereby he is discerned to belong to this or that nobleman, or gentleman.

COGNOMEN, in roman antiquity, the third or family name of a person. See the article AGNOMEN.

COGNOVIT ACTIONEM, in law, is where a defendant acknowledges the plaintiff's cause against him to be true, and, after issue joined, suffers judgment to be entered against him, without a trial.

COGS, or COGGLES, a kind of flat-bottomed boats used in rivers.

CO-HABITATION, among civilians, denotes the state of a man and a woman who live together like husband and wife, without being legally married.

By the common law of Scotland, co-habitation for year and day, or a complete twelve-month, is deemed equivalent to matrimony.

CO-HEIR, one who succeeds to a share of an inheritance, to be divided among several.

Female co-heirs are, by the law of England, called coparceners. See the article CO-PARCENERS.

COHESION, in philosophy, that action by which the particles of the same body adhere together, as if they were but one.

The cause of this cohesion has extremely perplexed the philosophers of all ages. In all the systems of physics, matter is supposed, originally, to consist of minute indivisible atoms; but how, and by what principle these several and distinct corpuscles should come first combined into little systems, and how they should come to persevere in that state of union, is a point not yet determined; a point of the

greateſt difficulty, and even of the greateſt importance of any in phyſics. J. Bernoulli thinks it owing to the preſſure of the atmoſphere; others, to the figure of the component particles; but the generality, with Sir Iſaac Newton, to attraction. See the article ATTRACTION.

Inſtead, however, of entertaining our readers with refined ſpeculations of this kind, which are more curious than uſeful, we ſhall ſubjoin a table of the different force of coheſion in different bodies, as aſcertained by the ingenious Muſchenbroeck: this force he eſtimated by the weights required to pull them aſunder, drawing according to their length: the pieces of wood were of a long ſquare form, of which each ſide was $\frac{20}{100}$ of an inch; and his experiments upon metals were made by ſuſpending weights to wires of each ſort, whoſe diameter was $\frac{1}{10}$ of a rhinland inch, or $\frac{135}{1390}$ of an inch engliſh. The reſult of all which experiments may be ſeen in the following table.

Bodies to be drawn aſunder.	Weights capable of doing it.
Wood of the linden-tree	1000 lb
of alder	1000
of fir	600
of oak	1150
of elm	950
of beech	1250
of aſh	1250
Copper	299¼
Yellow braſs	360
Gold	500
Silver	370
Iron	450
Tin	40¼
Lead	29¼

Theſe were the different forces of coheſion in bodies, when pulled length-ways: and in order to try their tranſverſe coheſion, or when the force acted in a direction perpendicular to their length, he fixed one of the ends of the ſame pieces of wood as before, into a ſquare hole of a metal-plate, and then hung weights on the other end, ſufficient to break each piece at the ſaid hole. Theſe weights, and diſtances from the hole, were as follows:

Pieces of wood.	Diſtances.	Weights.
Fir	9 inches.	40 oz.
Oak	8½	48
Elm	9	44
Pine	9½	36½
Alder	9¼	48
Beech	7	56½

COHOBATION, in chemiſtry, the returning a liquor diſtilled from any ſubſtance, back upon the ſame ſubſtance, and diſtilling it again, either with or without an addition of freſh ingredients.

The deſign of this operation is to procure the united virtues of any ſubſtance in their utmoſt ſtrength. Cohobated waters are much extolled by Boerhaave.

COHORT, *cohors*, in roman antiquity, the name of a part of the roman legion, comprehending about ſix hundred men. There were ten cohorts in a legion, the firſt of which exceeded all the reſt, both in dignity and number of men. When the army was ranged in order of battle, the firſt cohort took up the right of the firſt line, the reſt followed in their natural order, ſo that the third was in the center of the firſt line of the legion, and the fifth on the left, the ſecond between the firſt and third, and the fourth between the third and fifth: the five remaining cohorts formed a ſecond line, in their natural order.

COIF, the badge of a ſerjeant at law, who is called ſerjeant of the coif, from the lawn-coif they wear under their caps when they are created ſerjeants.

The uſe of the coif was to cover the clerical tonſure. See the article TONSURE.

COIL, or QUOIL. See the article QUOIL.

COILING *of the ſtud*, the firſt chooſing of a colt for any ſervice.

COILON, κοιλον, in the antient grecian theatres, the ſame with the cavea of the Romans. See the article CAVEA.

COIMBRA, a large city of Portugal, in the province of Beira, ſituated on the river Mondego, about ninety-ſix miles north of Liſbon: weſt longitude 9°, and north latitude 40° 20′.

COIN denotes all manner of the ſeveral ſtamps and ſpecies of money in any nation. In earlier times, when the neceſſity of traffic put men upon the expedient of having money; and metals, on account of their firmneſs, cleanlineſs, and durableneſs, were pitched upon to ſerve the end; each perſon cut his metal into pieces of different ſizes and forms, according to the quantity to be given for any merchandize, or according to the demand of the ſeller, or the quantity ſtipulated between them. It was uſual then to go to market laden with metal, in proportion to the purchaſe to be made; and furniſhed with inſtruments for proportioning it, and with ſcales for dealing it out, according as occaſion required. By de-

degrees it was found more convenient to have pieces ready weighed; and as there were different weights required, all those of the same weight were distinguished with the same mark or figure. At length the growing commerce of money beginning to be disturbed with frauds, both in the weights and the matter, the public authority interposed, and hence arose the first stamps, or impressions of money, to which succeeded the names of the moneyers, and at length the effigies of the prince, the date, legend, and other precautions, to prevent the alteration of the species: thus were coins completed.

We hope the reader will not be dissatisfied to find here tables of the most remarkable coins, both antient and modern. We shall begin with the antient.

The Jewish COINS, and values in english money, are as follow.

						l.	s.	d.	
Gerah						0	0	1	$\frac{59}{100}$
10	Bekah					0	1	1	$\frac{11}{10}$
20	2	Shekel				0	2	3	$\frac{3}{8}$
1000	100	50	Maneh, Mina hebraica			5	14	0	$\frac{3}{4}$
60000	6000	3000	60	Talent		342	3	9	
Solidus aureus, or sextula, worth						0	12	0	$\frac{1}{2}$
Siclus aureus, worth						1	16	6	
A talent of gold, worth						5475	0	0	

The Grecian COINS, with their value and proportion.

										l.	s.	d.	q.
Lepton										0	0	0	0 $\frac{7}{336}$
7	Chalcus									0	0	0	0 $\frac{3}{48}$
14	2	Dichalcus								0	0	0	1 $\frac{7}{24}$
28	4	2	Hemiobolium							0	0	0	2 $\frac{1}{24}$
56	8	4	2	Obolus						0	0	1	1 $\frac{1}{6}$
112	16	8	4	2	Diobolum					0	0	2	2 $\frac{1}{3}$
224	32	16	8	4	2	Tetrobolum				0	0	5	0 $\frac{2}{3}$
336	48	24	12	6	3	$1\frac{1}{2}$	Drachma			0	0	7	3
672	96	48	24	12	6	3	2	Didrachmon		0	1	3	2
1344	192	96	48	24	12	6	4	2	Tetradrach. stater	0	2	7	0
1680	240	120	60	30	15	$7\frac{1}{2}$	5	$2\frac{1}{2}$	$1\frac{1}{2}$ Pentadrach	0	3	2	3

Of these the drachma, didrachma, &c. were of silver, the rest, for the most part, of brass. The grecian gold coins were the stater aureus, worth twenty-five attic drachms of silver; the stater cyzicenus, stater philippicus, and stater alexandrinus, worth twenty-eight drachms; and the stater daricus, according to Josephus, worth fifty attic drachms; and the stater crœsius of the same value.

The value of the Roman COINS.

					s.	d.	q.
Teruncius					0	0	0 $\frac{775}{1000}$
2	Semilibella				0	0	1 $\frac{55}{100}$
4	2	Libella, or As			0	0	3 $\frac{1}{10}$
10	5	$2\frac{1}{2}$	Sestertius		0	1	3 $\frac{3}{4}$
20	10	5	2	Quinarius / Victoriatus	0	3	3 $\frac{1}{2}$
40	20	10	4	2 Denarius	0	7	3

Of these the denarius, victoriatus, sestertius, and sometimes the as, were of silver, the rest of brass. The roman gold coin was the aureus, which weighed generally double the denarius, the value of which, according to the first proportion of coinage mentioned by Pliny, was worth

	l.	s.	d.	
According to the proportion that obtains among us, worth	1	4	3	$\frac{3}{4}$
According to the decuple proportion, mentioned by Livy and Julius Pollux, worth	1	0	9	
According to the proportion mentioned by Tacitus, and which afterwards obtained, whereby the aureus exchanged for 25 denarii, its value is	0	12	11	
	0	16	1	$\frac{3}{4}$

It must be observed, that in all these tables of antient coins, silver is reckoned at five shillings, and gold at four pound the ounce.

Modern coins, current in the four quarters of the earth at this day, are either made of metals, or they are ſhells and fruits. The metals are gold, ſilver, copper, tin, and lead, to which may be added billon, a mixture of ſilver and copper in a certain proportion.

In Europe none are uſed beſide gold, ſilver, copper, and billon: in ſome parts of the Eaſt-Indies they likewiſe uſe tin and lead: as to ſhells and fruits, they are the ſmall money of ſeveral nations in Aſia, Africa, and America.

Britiſh COINS. In England, the current ſpecies of gold are the guinea, half guinea, jacobus, laureat, angel, and roſe-noble; the four laſt of which are are now ſeldom met with, having been moſtly converted into guineas, chiefly during the reigns of Charles II. and James II. The ſilver coins are the crown, half crown, ſhilling, and ſix-pence: there are likewiſe penny, two-penny, three-penny, and groat pieces in ſilver.

The copper coins are the halfpenny and farthing.

Value and proportion of the Engliſh COINS.

Farthing						
2	Halfpenny					
4	2	Penny				
48	24	12	Shilling			
120	60	30	2½	Half crown		
240	120	60	5	2	Crown	
960	480	240	20	8	4	Pound, accompt
1008	504	252	21	8 2/5	4 1/5	1 1/20 Guinea
			25	10	5	1 1/5 Jacobus
			23	9 1/5	4 3/5	Carolus, or Laureat.

In Scotland, by the articles of the union, it is appointed that all the coins be reduced to the engliſh, and the ſame accompts be obſerved throughout the whole iſland. Till then, the Scots had their pounds, ſhillings, and pence as in England; but their pound was but twenty-pence engliſh, and the others were in proportion; accordingly their mark was 13 s. 4 d. ſcots, current in England at 13 1/2 d. their noble in proportion.

Beſide theſe they had their turnorer, pence, and halfpence; their penny 1/12 of that of England: beſides baſe money of achiſons, babees, and placks; the bodle 1/6 of the penny, 1/4 of the achiſon, 1/3 of the babee, and 1/2 of the plack.

In Ireland the coins are as in England, *viz.* guineas, ſhillings, *&c.* with this difference, that the engliſh ſhilling paſſes for twenty-ſix halfpence, which are the only coin peculiar to that country.

French COINS. The only gold-coin now current in France is the Louis d'or, with its diviſions, which are half and quarter, and its multiples, which are the double and quadruple louis: till the year 1700, they had gold-lys and ecus or crowns; but they are now no more. The ſilver-coins are the ecu and the grand ecu of ſix livres; pieces of twenty-four ſols, of twelve ſols, and of ſix ſols. The billon-coins are of two kinds, each called ſols, ſome of fifteen deniers, others of twenty one: to theſe may be added the deniers current in the Lionois, Provence, Dauphiny, and other parts. Laſtly, the copper-coin is the liard, equal to three deniers, and is ordinarily called the double.

Value and proportion of the French COINS.

Denier, equal to 1/6 of a farthing ſterling						l.	s.	d.
2	Double							
3	1½	Liard						
12	6	4	Sol Paris is equal nearly to			0	0	0 ½
240	120	80	20	Livre, accompt		0	0	10 ½
720	360	240	60	3	Ecu	0	2	7 ½
The old Louis d'or is valued at						0	16	9.3
The new Louis d'or at						1	0	0.6

Spaniſh COINS. In Spain, and the ſtates depending upon it, the gold-coin is the piſtole; above which is the double piſtole and piece of four piſtoles, and under it the half piſtole; to which muſt be added the caſtillans of gold. The ſilver-money are the piaſtre, or piece of eight rials, and its diminutions; as alſo the ſimple rial, with its diminutions. The copper-coins are the ochavos, or octavos, which are of two kinds, the one equal to four maravedis, and ordinarily called quarta;

the other double this, and called double quarta: and laſtly, the maravedis. It muſt be obſerved, that in Spain they have new money and old; the old current in Sevil, Cadiz, Andaluſia, &c. is worth 25 *per cent*, more than the new current at Madrid, Bilboa, St. Sebaſtian, &c. This difference is owing to their king Charles II. who, to prevent the exportation of money, raiſed it 25 *per cent*. which, however, he was able to effect only in part, ſeveral provinces ſtill retaining the antient rate.

Value and proportion of the Spaniſh COINS.

Quarta, 4 maravedis
Octavo, or double quarta, 8 maravedis

	l.	s.	d.
Real old Plata, equal to	0	0	6 ¾
Piece of eight, or piaſtre	0	4	6
Piſtole	0	16	9,3

Portugueſe COINS. Thoſe of gold are the milleray or St. Stephen, and the moeda d'oro, or, as we call it, moidore, which is properly their piſtole; above this are doppio moedas or double piſtoles, and quadruple ſpecies equal to five piſtoles. The ſilver coins are the cruzada, pataca or piece of eight, and the vintem, of which they have two ſorts, the one ſilver and the other billon. The ree is of copper, which ſerves them in accompts as the maravedis does the Spaniards.

Res, ree, or rez, equal to three-fifths of a farthing ſterling.
Vintem, 20 res.
Cruzada, 26 vintems.

	l.	s.	d.
Mi-moeda, or half piſtole	0	13	6
Moeda d'oro, or piſtole	1	7	0
Doppio moeda, or double piſtole	2	14	0
Ducat of fine gold	6	15	0

Beſides the above, they have alſo pieces of gold of the value of 31. 12s. 11. 16s. and other ſubdiviſions.

Dutch COINS. Thoſe of ſilver are crowns or dollars, ducatoons, florins, and ſhillings, each of which has its diminution. The ſtiver is of billon; the duyt and penny, of copper.

	l.	s.	d.
Ducat of Holland	0	9	3 .2
Ducatoon	0	5	5 .59
Patagon, or rix dollar	0	4	4 .28
The three-guilder piece, or ſixty ſtivers	0	5	2 .46
The guider-florin, or twenty ſtivers	0	1	8 .08
The lion dollar	0	3	7 .07

The ſchelling goes for ſix ſtivers, and the ortke is the fourth part of a ſtiver.

Flemiſh COINS. Thoſe of gold are imperials, rides or philips, alberts, and crowns; thoſe of ſilver are philips, rixdollars, patagons, ſchellings, and guldens; and thoſe of copper, patards.

	l.	s.	d.
Groat, 8 patards.			
Single ſtiver	0	0	1 ½
Schelling	0	0	7 ½
Gulden	0	2	0
Rixdollar, dollar, patagon	0	4	6
Imperial	0	11	9

The german, dutch, and french coins are current here.

German COINS. Thoſe of gold are ducats, which are of various kinds, oboli of the Rhine, and florins: of this laſt kind there are ſome likewiſe of ſilver, beſides rixdollars and izelottes, which are all of that metal.

	s.	d.
Ducat of the biſhop of Bamberg	9	3 .2
Ducat of Hanover	9	2 .7
Ducat of Brandenburg	9	3 .2
Ducatoon of Cologn	5	5 .02
Rixdollar or patagon of Cologn	4	4 .53
Rixdollar or patagon of Liege	4	7 .48
Rixdollar of Mentz	4	7 .27
Rixdollar of Frankfort	4	6 .53
Rixdollar of the Palatinate and Nuremberg	4	7 .55
Rixdollar of Lunenburg	4	6 .65
Old rixdollar of Hanover	4	7 .03
Old bank dollar of Hamburgh	4	6 .92
Rixdollar of Lubec	4	7 .54
Gulden of Hanover	2	4 .14
Gulden of Zell.	2	3 .07
Gulden of Brandenburg	2	3 .81
Gulden of Saxony	2	4 .12

Italian COINS. The ſeveral ſtates of Italy have ſeveral current monies, though there are ſome common to all, ſuch as the piſtole of gold, and the ducatoon and florin of ſilver, which are of various weights, fineneſs, &c. The coins peculiar to Rome are the julios of ſilver, the pignatelle of billon, and the baiocco, demibaiocco, and quadrine of copper. Venice has its ſequins of gold; its juſtins, or ducatoons, and derlingues of ſilver. Naples its carlins, Genoa its croiſats, Savoy and Piedmont its lys; all ſilver: this laſt ſtate has alſo papiroles and cavales of billon.

Gold coins of Italy.

	s.	d.
The ſequin of Venice	9	5 .7
The old italian piſtole	16	7 .6
Piſtole of Rome, Milan, Venice, Florence, Savoy, Genoa	16	6 .7

Double

	s.	d.	
Double ducat of Genoa, Venice, and Florence	18	7	.7
Single ducat of the ſame places	9	3	.8
Silver Coins.			
The old ducat of Venice	3	4	.50
The ducat of Naples	3	4	.43
The ducat of Florence or Leghorn	5	4	.62
The tarin, or fifth part of the ducat of Naples	0	8	.09
The carlin, or tenth part	0	4	.04
The eſcudi, or crown, of Rome, or piece of ten julios, or one hundred baioccos	5	1	
The teſton of Rome, or piece of three julios	1	6	.32
The julio of Rome	0	6	.10
The croiſat of Genoa	6	6	.74
Juſtine of Venice	4	9	
Derlingue, ¼ of the juſtine	1	2	¼

Swiſs COINS are ratzes and blazes of billon; the ratze equal to $\frac{2}{3}\frac{3}{2}$ of a penny ſterling: and the blaze of Berne, nearly equal to the ratze.

The german, french, and italian coins are current here.

Poliſh COINS	s.	d.	
The gold ducat	9	2	.1
The old ſilver dollar of Dantzic	4	6	.27
The old rixdollar of Thorn	4	5	.85
The rixdollar of Sigiſmund III. and Uladiſlaus IV. kings of Poland	4	6	.4
Abra	1	0	$\frac{1}{5}$
Roup	0	4	$\frac{1}{24}$
Groch	0	0	$\frac{5}{6}$

Daniſh COINS are,	s.	d.	
The gold ducat	9	3	.2
The horſe	1	1	½
The four-mark piece	2	8	.23
Marc lubs	1	6	
Scheſdal, or two marks	3	0	
Rix mark	0	11	
Slet mark	0	9	

Swediſh COINS. Thoſe of copper are the rouſtique, alleuvre, mark, and money.

	s.	d.	
A gold ducat is equal to	9	3	.2
An eight-mark piece of ſilver	5	2	
A four-mark piece	2	7	
A chriſtine	1	1	½
Caroline	1	5	¼

The ſwediſh money, properly ſo called, is a kind of copper, cut in little ſquare pieces, or plates, about the thickneſs of three engliſh crowns, and weighing five pounds and a half, ſtamped at the four corners with the ſwediſh arms, and current in Sweden for a rixdollar, or piece of eight.

Muſcovite COINS. The proper coins of Muſcovy are,

	s.	d.	
The copec of gold, worth	1	6	$\frac{1}{11}$
Copec of ſilver, or denaing	0	1	
Poluſk	0	0	½
Motofske	0	0	¼
The ruble of ſilver, valued at	4	6	
The cheroonitz of gold, called ducat by foreigners	9	6	

Turkiſh COINS. The gold-coins are zingerlees, worth two dollars two thirds; and tomilees, worth two dollars and a half, reckoning each dollar at 108 aſpers: the ſultani, xeriff, and chequeens, each worth about 9 s. 4 d. 5 d. or 6 d. ſterling.

The ſilver ones are the aſper, worth a trifle more than a farthing ſterling; and the para, or medin, worth three aſpers.

COINS *of the coaſt of Barbary*. Though the general currency in theſe parts are ſpaniſh dollars, french crowns, hungarian ducats, and the turkiſh golden ſultanins, there are ſome coins ſtruck by the kings or deys in their different territories.

At Morocco, the metacals are a ſort of gold ducats, made by the Jews at their pleaſure, ſo that their ſtandard is very uncertain.

The blanquille of ſilver, worth 2 ¼ d. the ſilours of copper, eight of which go to a blanquille.

At Algiers the gold-coins are ſultanins and aſpers; burbas, of which ſix go to an aſper. The doubla is ſilver, and worth about 4 s. 6 d. The rubie, median, and zian are of gold, the firſt equal to 35 aſpers, or 1 s. 9 d. and the laſt 100 aſpers.

At Tunis they have ſultanins of gold, but heavier by one third than thoſe of Conſtantinople: the naſura of ſilver, cut nearly ſquare; and doublas and burbas of the ſame value with thoſe of Algiers.

Perſian COINS are either of ſilver or copper: of the firſt kind are the

	s.	d.	
Abaſſi, equal to	1	4	½
Mamoudi	0	8	¼
Shakee	0	4	⅛

Copper coins are the caſbequi, or cabeſqui, equal to $\frac{1}{12}$ of a penny ſterling.

The telac, or cheraſis, is of gold, but it has no currency among the merchants, being only a medal ſtruck by every king of Perſia upon his acceſſion to the crown.

Chineſe

Chineſe COINS. Throughout the kingdom of China and Tonquin there are not properly any coins ſtruck; inſtead of theſe they cut their gold and ſilver into little pieces of different weights: thoſe of gold are called goltſchuts; thoſe of ſilver the natives call leam, the Portugueſe taels. Beſide theſe they have a ſmall money of lead mixed with the ſcum of copper, having holes in the middle to ſtring them on for the eaſe of numbering; this ſpecies is called caxa, cas, and pitis; and the ſtring which uſually holds 200, is called ſanta. There are two ſorts of goltſchuts, the one of 32 $\frac{1}{7}$ ounces, and the other but half as much. The tael, or leam, is equal to 6 *s.* 8 *d.* ſterling. Caxa, cas, or pitis, one third of a farthing; 300,000 of them are only worth about 56 guilders and 5 ſtivers of Holland.

COINS *of Japan.* The Japoneſe ſtrike coupants both of gold and ſilver; and copper pieces with holes in the middle, like thoſe of China, ſix hundred of which make the tael. The other monies, which they cut, like the Chineſe, of different weights, are chiefly three, the largeſt of the weight of ſix reals, *viz.* 48 taels, the tael equivalent to 75 dutch ſtivers; the ſecond equal to 6 $\frac{1}{2}$ taels, and the third to 1 $\frac{1}{17}$ tael.

Coupant of gold, weighing one ounce ſix drachms, its figure a long oval, the longeſt diameter about four inches, and the ſhorteſt half an inch, 61. 12*s.* 6 *d.*

Other coupants of gold, near one third of the former, amounting to about 2 l. 4 *s.* 2 *d.* Coupant of ſilver current at 4 *s.* 6 *d.*

Copper money ſeven twelfths of a farthing.

COINS *of Siam.* In the dominions of Siam are ſtruck gold pieces five or ſix grains heavier than the half piſtole of Spain: but theſe are rather pieces of curioſity, than of uſe in commerce. Their ſilver coin is the tical or baat, the diminutions of which are the mayon or ſeling, $\frac{1}{4}$ of the tical; the fouang, $\frac{1}{2}$ of the mayon; the page, $\frac{1}{4}$ of the fouang; and clam, $\frac{1}{2}$ of the page: here are alſo ſompays, in value $\frac{1}{2}$ a fouang. The tical weighs 3 gros and 23 grains, which, reckoning the ounce of ſilver 3 $\frac{1}{2}$ livres tournois, is 32 ſols and 4 deniers that money, as it weighs near half an ounce.

COINS *of the coaſts and iſlands of the Indies.* The principal, and thoſe moſt generally current, are pagodos, rupees, larins, fanos, or fanoms, and coupans, each of which are ſtruck both of gold and ſilver. Beſides theſe, there are alſo particular coins, as at Goa, St. Thomas's of gold; at Surat, Agra, and the reſt of Indoſtan, the pecha, or peſſa, and doudous, all of copper; the baſarucos and chedas, of tin.

Pagodo, gold, is common on all the coaſts of Coromandel, and almoſt the only one in uſe in the trade carried on there. The Engliſh make them at Fort St. George, and the Dutch at Nagapatnam, of the ſame ſtandard and weight with thoſe of the country. The value, 5 *s.*

The value of the ſilver pagodo is very different: the ſmalleſt are worth eight tangas, reckoning the tanga at 90 or 100 baſarucos, 8 *s.*

Gold rupee worth 1 *l.* 11 *s.* 6 *d.*

Silver rupee varies in fineneſs and value. There are three kinds current, *viz.* rupee ſicca, worth at Bengal 2 *s.* 11 *d.*

Rupee of Madraſs, 2 *s.* 5 *d.* $\frac{1}{2}$ *d.*

Rupee of Surat, 2 *s.* 3 *d.*

This is to be underſtood of the new rupees; for as to the old ones of each kind, their value is leſs; thoſe of Madraſs are but equal to 1 *s.* 11 *d.* thoſe of Surat 2 *s.* and the ſiccas 2 *s.* 4 *d.*

Larin, in form of a cylindar, bent in two, and flatted at each end, worth 9 *d.*

Fanoms of gold are of different fineneſs, weight and value. The heavieſt are not worth above 5 *d.* to 5 $\frac{1}{2}$ *d.* and the lighteſt little more than 5 farthings.

The ſilver fanoms are not worth at moſt above 2 *d.*

St. Thomas equal to 9 *s.*

Pecha or peſſa of copper worth about $\frac{1}{2}$ *d.*

Doudou, ſomewhat leſs than $\frac{1}{2}$ *d.*

Baſaruco, $\frac{1}{5}$ of a farthing.

Cheda of pewter is of two kinds, the one octogonal, current at 1 $\frac{1}{4}$ *d.*

The other round, at $\frac{1}{3}$ *d.*

In the dominions of the great mogul are roupees, mamoudas, and pechas; the firſt, both of gold and ſilver; the ſecond, of ſilver alone; and the third of copper. There are others ſtruck by the princes tributary to him, particularly a ſilver piece of the king of Matoucha, worth $\frac{1}{4}$ *d.* a ſilver piece of the king of Ogden, worth 6 *d.* a gold piece of the king of Achem, worth 1 *l.* 3 *s.* a gold piece of the king of Macaſſer, taken by the Dutch for a guilder.

Shells current for COINS are, 1. Cowries, brought from the Maldives, and paſs for $\frac{1}{128}$ of a penny ſterling. The natives of the

the coaſts of Africa call them bouges. 2. Porcelaine, in America, a ſhell nearly on the ſame footing with the cowrie. 3. Zimbi, current particularly in the kingdoms of Angola and Congo.

Fruits current for COINS, are, 1. Cacao, among the Americans, fifteen of which are eſteemed equivalent to a ſpaniſh rial. 2. Maiz, which has ceaſed to be current ſince the diſcovery of America by the Europeans. 3. Almonds, uſed in the Eaſt-Indies where cowries are not current. The value of theſe is higher or lower, according as the year is more or leſs favourable to this fruit; in a common year, an almond is worth about $\frac{1}{20}$ of a farthing.

COIN, in architecture, a kind of dye cut diagonal-wiſe, after the manner of a flight of a ſtair caſe, ſerving at bottom to ſupport columns in a level, and at top, to correct the inclination of an entablature ſupporting a vault.

COIN is alſo uſed for a ſolid angle compoſed of two ſurfaces inclined towards each other, whether that angle be exterior, as the coin of a wall, a tree, *&c.* or interior, as the coin of a chamber or chimney. See the article QUOIN.

COINAGE, or COINING, the art of making money, as performed either by the hammer or mill.

Formerly the fabric of coins was different from what it is at preſent. They cut a large plate of metal into ſeveral little ſquares, the corners of which were cut off with ſheers. After having ſhaped theſe pieces, ſo as to render them perfectly conformable, in point of weight, to the ſtandard piece, they took each piece in hand again, to make it exactly round, by a gentle hammering. This was called a planchet, and was fit for immediate coining. Then engravers prepared, as they ſtill do, a couple of ſteel maſſes in form of dyes, cut and terminated by a flat ſurface, rounded off at the edges. They engraved or ſtamped on it the hollow of a head, a croſs, a ſcutcheon, or any other figure, according to the cuſtom of the times, with a ſhort legend. As one of theſe dyes was to remain dormant, and the other moveable, the former ended in a ſquare priſm, that it might be introduced into the ſquare hole of the block, which, being fixed very faſt, kept the dye as ſteady as any vice could have done. The planchet of metal was horizontally laid upon this inferior maſs, to receive the ſtamp of it on one ſide, and that of the upper dye, wherewith it was covered, on the other. This moveable dye, having its round engraved ſurface reſting upon the planchet, had at its oppoſite extremity a flat ſquare, and larger ſurface, upon which they gave ſeveral heavy blows, with a hammer of an enormous ſize, till the double ſtamp was ſufficiently, in relievo, impreſſed on each ſide of the planchet. This being finiſhed, was immediately ſucceeded by another, and they thus became a ſtandard coin, which had the degree of fineneſs, the weight and mark, determined by the judgment of the inſpectors, to make it good current money. The ſtrong tempering which was and is ſtill given to the two dyes, rendered them capable of bearing thoſe repeated blows. Coining has been conſiderably improved and rendered expeditious, by ſeveral ingenious machines, and by a wiſe application of the ſureſt phyſical experiments to the methods of fining, dying, and ſtamping the different metals.

The three fineſt inſtruments the mint-man uſes, are the laminating engine, the machine making the impreſſions on the edges of coins, and the mill.

After they have taken the laminæ, or plates of metal, out of the mould into which they are caſt, they do not beat them on the anvil, as was formerly done, but they make them paſs and repaſs between the ſeveral rollers of the laminating engine, which being gradually brought cloſer and cloſer to each other preſently give the lamina its uniform and exact thickneſs. Inſtead of dividing the lamina into ſmall ſquares, they at once cut clean out of it as many planchets, as it can contain, by means of a ſharp ſteel trepan, of a roundiſh figure, hollow within, and of a proportionable diameter, to ſhape and cut off the piece at one and the ſame time. After theſe planchets have been compared and weighed with ſtandard pieces, filed or ſcraped to get off the ſuperfluous part of the metal, and then boiled and made clean, they arrive, at laſt, at the machine, (plate XLIV. fig. 4. n°. 1.) which marks them upon the edge; and finally, the mill, (*ibid.* N°. 2.) which, ſqueezing each of them ſingly between the two dyes, brought near each other with one blow, forces the two ſurfaces or fields of the piece to fill exactly all the vacancies of the two figures engraved hollow. The engine which ſerves to laminate lead, gives a ſufficient notion


BRITISH MUSEUM

Fig. 1. CNICUS.

Fig. 2. COCHLEÆ.



Fig. 3. COEUR.



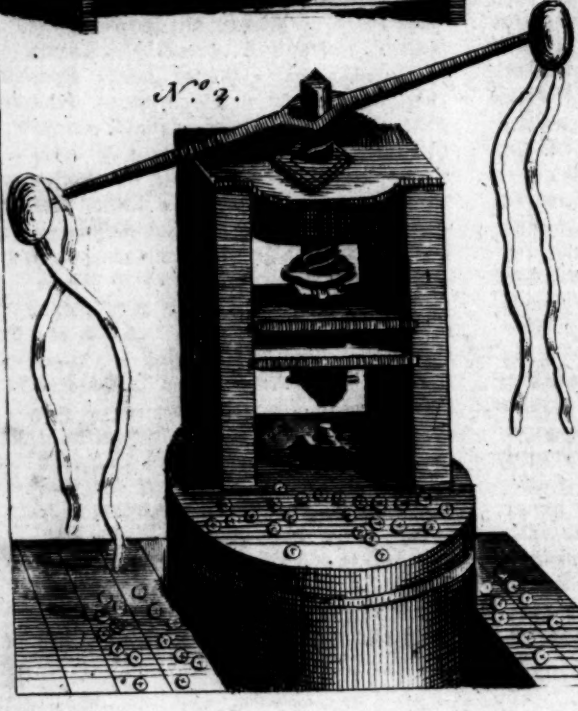
Fig. 4.
COINING
N.o 1.





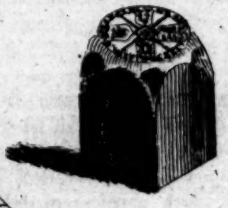
Fig. 5.
COLYMBUS.

N.o 2.





N.o 3.



J. Jefferys sculp.

notion of that which ſerves to flaten gold and ſilver laminæ between rollers of a leſſer ſize.

The principal pieces of the machine (N° 1.) to ſtamp coins on the edge, are two ſteel laminæ, about a line thick. One half of the legend, or of the ring, is engraved on the thickneſs of one of the laminæ, and the other half on the thickneſs of the other; and theſe two laminæ are ſtraight, although the planchet marked with them be circular.

When they ſtamp a planchet, they firſt put it between the laminæ in ſuch a manner, as that theſe being each of them laid flat upon a copper plate, which is faſtened upon a very thick wooden table, and the planchet being likewiſe laid flat upon the ſame plate, the edge of the planchet may touch the two laminæ on each ſide, and in their thick part.

One of theſe laminæ is immoveable, and faſtened with ſeveral ſcrews; the other ſlides by means of a dented wheel, which takes into the teeth that are on the ſurface of the laminæ. This ſliding lamina makes the planchet turn in ſuch a manner, that it remains ſtamped on the edge, when it has made one turn. Only crown and half-crown pieces can bear the impreſſion of letters on the thickneſs of their edges.

The coining engine or mill is ſo handy (*ibid.* n°. 2.) that a ſingle man may ſtamp twenty thouſand planchets in one day: gold, ſilver, and copper planchets, are all of them coined with a mill, to which the coining ſquares (*ibid* n°. 3.) commonly called dyes, are faſtened; that of the face under, in a ſquare box garniſhed with male and female ſcrews, to fix and keep it ſteady; and the other above, in a little box garniſhed with the ſame ſcrews, to faſten the coining ſquare. The planchet is laid flat on the ſquare of the effigy, which is dormant, and they immediately pull the bar of the mill by its cords, which cauſes the ſcrew ſet within it to turn. This enters into the female ſcrew, which is in the body of the mill, and turns with ſo much ſtrength, that by puſhing the upper ſquare upon that of the effigy, the planchet, violently paſſed between both ſquares, receives the impreſſion of both at one pull, and in the twinkling of an eye.

The planchet thus ſtampt and coined, goes through a final examination of the mint-wardens, from whoſe hands it goes into the world.

In the COINING *of medals*, the proceſs is the ſame, in effect, with that of money; the principal difference conſiſting in this, that money having but a ſmall relievo, receives its impreſſion at a ſingle ſtroke of the engine; whereas for medals, the height of their relievo makes it neceſſary that the ſtroke be repeated ſeveral times: to this end, the piece is taken out from between the dyes, heated, and returned again; which proceſs in medallions and large medals, is repeated fifteen or twenty times before the full impreſſion be given: care muſt be taken that every time the planchet is removed, to take off the ſuperfluous metal, ſtretched beyond the circumference, with a file. Medallions, and medals of a high relievo, are uſually firſt caſt in ſand, by reaſon of the difficulty of ſtamping them in the preſs, where they are put only to perfect them; in regard the ſand does not leave them clear, ſmooth, and accurate enough. Therefore we may ſee that medals receive their form and impreſſion by degrees, whereas money receives them all at once.

Britiſh COINAGE, both by the beauty of the engraving, and by the invention of the impreſſions on the edges, that admirable expedient for preventing the alteration of the ſpecies, is carried to the utmoſt perfection.

It was only in the reign of king William III. that the hammer-money ceaſed to be current in England, where till then it was ſtruck in that manner, as in other nations. Before the hammer ſpecies was called in, the engliſh money was in a wretched condition, having been filed and clipped by natives as well as foreigners, inſomuch, that it was ſcarce left of half the value: the retrieving this diſtreſſed ſtate of the engliſh money, is looked upon as one of the glories of king William's reign.

The britiſh coinage is now wholly performed in the Tower of London, where there is a corporation for it, under the title of the mint. Formerly there were here, as there are ſtill in other countries, the rights of ſeignorage and braſſage; but ſince the eighteenth year of king Charles the ſecond, there is nothing taken either for the king, or for the expences of coining; ſo that weight is returned for weight, to any perſon who carries their gold and ſilver to the Tower.

The ſpecies coined in Great Britain, are eſteemed contraband goods, and not to be

be exported. All foreign ſpecies are allowed to be ſent out of the realm, as well as gold and ſilver in bars, ingots, duſt, &c.

There is a duty of ten ſhillings *per* ton on wine, beer, and brandy imported, called the coinage-duty, granted for the expence of the king's coinage.

Barbary COINAGE, particularly that of Fez and Tunis, is under no proper regulations, as every goldſmith, jew, or even private perſon, undertakes it at pleaſure; which practice renders their money exceeding bad, and their commerce very unſafe.

Muſcovite COINAGE. In Muſcovy there is no other coin ſtruck but ſilver, and that only in the cities of Muſcow, Novogrod, Twere, Pleſkow, and Peterſburgh. The coinage of each of theſe cities is let out to farm, and makes part of the royal revenue.

Perſian COINAGE. All the money made in Perſia, is ſtruck with a hammer, as is that of the reſt of Aſia; and the ſame may be underſtood of America, and the coaſts of Africa, and even Muſcovy: the king's duty, in Perſia, is ſeven and a half *per cent.* for all the monies coined, which are lately reduced to ſilver and copper, there being no gold-coin there, except a kind of medals, at the acceſſion of a new ſophi.

Spaniſh COINAGE is eſteemed one of the leaſt perfect in Europe. It is ſettled at Sevile and Segovia, the only cities where gold and ſilver are ſtruck; and yet there is ſcarcely any ſtate in the world where ſo much money is coined, as in that of the king of Spain.

The invention of the mill is not yet gone out of Europe; nor even eſtabliſhed in every part of it: nor was the invention known till the year 1553, when the coining mill was firſt invented by an engraver, one Antoine Brucher, and was firſt tried in the french king's palace at Paris, for the coining of counters: ſome attribute the invention of the mill to Varin, a noted engraver, who, in reality, was no more than an improver of it; and others aſcribe it to Aubry Olivier, who had the inſpection of it.

This machine has met with various fates ſince its firſt invention, being one time uſed, and at another time laid aſide, and the hammer reſumed: but it has now got ſuch a footing and reputation, both for its expedition, and the beauty of its impreſſion on the ſpecies ſtruck with it, that there appears no great probability of its ever being again diſuſed.

COINING, in the tin-works, is the weighing and ſtamping the blocks of tin with a lion rampant, performed by the king's officer; the duty for every hundred weight being four ſhillings.

CO-INDICATIONS, among phyſicians, denote ſigns, which, together with others, ſerve to indicate or point out the nature of a diſeaſe.

COIRE, or CHUR, the capital of the country of the Griſons, in Switzerland, ſituated on the river Rhine, fifty-three miles ſouth of Conſtance: eaſt longitude 9° 25′, north latitude 46° 40′.

COITION, the intercourſe between the male and the female in the act of generation. See the article GENERATION.

Frogs, it is obſerved, are forty days in the act of coition.

It is alſo related by Bartholine, that butterflies make 130 vibrations with their wings in one act of coition.

COITION is alſo ſometimes uſed for the mutual attraction or tendency towards each other, which is found between iron and the magnet.

COIX, JOB'S TEARS, in botany, a genus of the monoecia-triandria claſs of plants; the corolla conſiſts of two valves: the valvulæ are ovato-lanceolated, very ſlender, and of the length of the cup. In the male flowers, the calyx is a glume containing two flowers, and has no awns: in the female, the calyx is the ſame, and the corolla a glume without any ariſta. There is no pericarpium: the ſeed, which is ſolitary and roundiſh, is covered by the indurated calyx.

COKENHAUSEN, a fortreſs of Livonia, ſituated on the river Dwina, about thirty-two miles eaſt of Riga: eaſt longitude 25°, north latitude 57°.

COLARBASIANS, in church-hiſtory, chriſtian heretics, in the ſecond century, who maintained the whole plenitude and perfection of truth and religion to be contained in the greek alphabet, and that it was upon this account that Jeſus Chriſt was called the alpha and omega: they rejected the Old Teſtament, and received only a part of St. Luke's goſpel, and ten of St. Paul's epiſtles, in the new.

COLARIN, in architecture, the little frize of the capital of the tuſcan and doric column, placed betwen the aſtragal and the annulets; called alſo hypotrachelium, and ſometimes cincture.

COLARIN is alſo uſed for the orlo or ring

on the top of the ſhaft of the column, next the capital.

COLATURE, the ſame with filtration. See the article FILTRATION.

COLCHESTER, a large borough-town of Eſſex, ſituated on the river Coln twenty miles north-eaſt of Chelmsford, on the road to Harwich; eaſt longitude 1°, north latitude 51° 55'.

It ſends two members to parliament.

COLCHICUM, MEADOW-SAFFRON, in botany, a genus of the hexandria-trigynia claſs of plants, with a monopetalous flower, divided into ſix oblong and erect ſegments; the fruit is a trilocular capſule, formed of three lobes, and containing a conſiderable number of roundiſh and rugoſe ſeeds.

The roots of this plant, once eſteemed poiſonous, are recommended by ſome in peſtilential and putrid caſes, the ſmall-pox, purple fevers, &c. But great caution ought to be uſed in adminiſtring it.

COLCOTHAR, in pharmacy, a preparation of vitriol calcined to a redneſs. However, what remains in the long neck, after the diſtillation of the ſpirit, is ſo much better calcined, than any body will be at the pains of doing on purpoſe; that it is uſually preferred, and is the ſubſtance kept under this name in the ſhops.

Colcothar is alſo prepared from chalcitis, by calcining it to a deep purple colour: in which ſtate it is very frequent in Turkey, where they preſcribe it in hæmorrhages with good ſucceſs; alſo as an aſtringent and ſtyptic, to ſtop bleeding. See VITRIOL and CHALCITIS.

COLD, in general, denotes the privation or abſence of heat; and, conſequently, thoſe who ſuppoſe heat to conſiſt in a briſk agitation of the component particles of the hot body, define cold to be ſuch a faint motion of theſe parts, as is either altogether or nearly imperceptible to our organs of feeling: in which ſenſe, cold is a mere term of relation between the cold body and the organs of ſenſation; and, in fact, the ſame body will be felt either hot or cold, according as the ſenſible organ is colder or hotter than it.

Be this as it will, cold is found to have very conſiderable effects, and therefore ſhould ſeem to be ſomething poſitive. An intenſe degree of heat reduces moſt bodies, even gold and the hardeſt ſtones, the diamond excepted, to a fluid ſtate. On the other hand, not only are theſe reſtored to their former ſolidity by cold, but greater degrees of it will congeal all kinds of water, even that of the ocean, and the watery particles to be found in ſpirits. See the articles FROST, CONDENSATION, &c.

COLD, in medicine, is found to be productive of inflammatory diſorders, as coughs, pleuriſies, peripneumonies, rheumatic pains, conſumptions, &c. See the articles COUGH, PLEURISY, PERIPNEUMONY, &c.

To remove a cold in the beginning, ſmall and repeated bleedings are recommended; which likewiſe prove beneficial in coughs and the confirmed conſumption, even after a purulent ſpitting, and hectical ſymptoms have appeared. The quantity, to be taken away at a time, may be from four to ſeven or eight ounces, once in eight or ten days; concerning which it is obſervable, that the patients do not find themſelves ſo much relieved on the firſt as on the ſecond or third night after bleeding.

What we commonly call catching cold, may be cured by lying much in bed; by drinking plentifully of warm ſack-whey, with a few drops of ſpirit of hart's-horn, poſſet-drink, water-gruel, or any other warm ſmall liquor. In ſhort, it ought to be treated at firſt as a ſmall fever, with gentle diaphoretics; and afterwards, if any cough or ſpitting ſhould remain, by ſoftening the breaſt with a little ſugar-candy and oil of ſweet almonds, or a ſolution of gum ammoniac in barley-water; taking care to go abroad well clothed.

This is a much more eaſy, natural, and effectual way than the common practice by balſams, linctuſes, pectorals, &c. which ſerve only to ſpoil the ſtomach, oppreſs the ſpirits, and hurt the conſtitution.

COLDENIA, in botany, a genus of the tetrandria-tetragynia claſs of plants, the flower of which conſiſts of a ſingle funnel-ſhaped petal: there is no pericarpium: the fruit is oval, compreſſed, rough, acuminated; and the ſeeds are four in number, convex and rough on one ſide, and angular and acuminated on the other.

COLDSHIRE-IRON, that which is brittle when cold. See the article IRON.

COLE-FISH, the engliſh name of a ſpecies of beardleſs gadus, with three back-fins, and the lower jaw longeſt. See GADUS.

COLEOPTERA, among zoologiſts, an order of inſects, comprehending all thoſe with four wings, the external pair of which are hard, rigid, and opake, and form a kind of caſe for the interior pair:

add to this, that the mouth conſiſts of two tranſverſe jaws.

Theſe animals are known, in engliſh, by the general name of beetles; whereof authors have eſtabliſhed a great many genera, from the different figures of their antennæ, or horns, and other general diſtinctions: ſuch are the *ſcarabæus*, or beetle properly ſo called, the *dermeſtes*, *caſſida*, *coccinella*, *chryſomela*, *dytiſcus*, *blatta*, *tenebrio*, and ſeveral other genera. See SCARABÆUS, DERMESTES, &c.

COLE-SEED, the ſeed of the *napus ſativa*, or long-rooted, narrow-leaved rapa, called, in engliſh, navew, and comprehended by Linnæus among the braſſica's, or cabbage-kind. See BRASSICA.

This plant is cultivated to great advantage in many parts of England, on account of the nape-oil expreſſed from its ſeeds. It requires a rich and ſtrong ſoil, eſpecially in marſh or fenny lands, thoſe newly recovered from the ſea, or indeed any other land that is rank and fat, whether arable or paſture. The beſt ſeeds are brought from Holland, and ſhould be ſown about Midſummer, the very day that the land is plowed: a gallon will ſerve an acre.

Beſides the oil already mentioned, it is likewiſe cultivated for winter-food to cattle, and is a very good preparative of land for barley or wheat.

COLE-WORT, in gardening, a ſpecies of braſſica. See BRASSICA.

COLIC, in medicine, a ſevere pain in the lower venter, ſo called, becauſe the diſorder was formerly ſuppoſed to be ſeated in the colon.

As the ſmall and great inteſtines differ with reſpect to their contexture, capacity, function and ſituation, ſo the pains which affect them are no leſs diſtinguiſhed by the places where they are ſeated, their degree of violence, their danger, and other acceding diſorders. It is obſerved, that pains in the ſmall inteſtines, are far more ſevere and acute than in the great ones. This is abundantly evident, from the effects of ſtrong cathartics, and poiſons of a cauſtic quality, in exciting moſt ſevere griping and racking pains, above and below the navel, as well as in the middle of the belly.

Moſt phyſicians take the whole regions of the inteſtines for the ſeat and ſubject of this pain; yet ſo, as that when one part of it is affected in an extraordinary manner, the whole inteſtinal tube, from the fauces to the anus, ſuffers by conſent; or the preternatural motions, and even the inverſions and injuries of the periſtaltic motion, are communicated to all the reſt in ſuch a manner, that, if the cauſe of the diſeaſe be very conſiderable, the whole nervous ſyſtem is at the ſame time affected to an extraordinary degree.

There are different cauſes of theſe ſevere pains of the inteſtines, and according to the nature, diſpoſition, and force of theſe cauſes, are the ſymptoms diverſified, and the danger more or leſs to be apprehended. A very frequent cauſe is a retention and induration of the fæces in the large inteſtines, and ſometimes in the ſmall ones, proceeding, in a great meaſure, from a load of acido-viſcid crudities, dry, juiceleſs, and aſtringent food, immoderate ſleep, and a way of life unuſed to exerciſe and motion. In this obſtructed and coſtive ſtate of the belly, whenever it happens, that, upon the uſe of ſweet aliments, and ſuch as are ſubject to ferment, of fat fleſh meat, eſpecially mutton, with drinking of cool liquors, and refrigeration of the feet and belly, the inflation of the abdomen is increaſed, and the pain exaſperated; hence, we may diſcern the nature and marks of the flatulent colic, which the antients aſcribed to a cold cauſe, and whoſe generation and frequent attacks ſuppoſe an imbecillity of the inteſtines, and a want of due tone and ſtrength in thoſe parts; whence this ſort of colic is very incident to fat and phlegmatic, as well as old and infirm, perſons, eſpecially if they take not due care to keep the cold from their feet, back and belly.

Another kind of colic is the bilious, which, according to the antients, owes its original to a hot cauſe, and ariſes from a bilious, acrid, corrupted humour, collected in too great plenty, and ſtagnating in the ſmall inteſtines, particularly the duodenum. It frequently ſucceeds a great fit of anger, eſpecially in perſons of a hot and dry conſtitution, in a hot ſeaſon; or it proceeds from an exceſſive uſe of hot and ſpirituous liquors, and by cooling potions, which obſtructs perſpiration, is exaſperated, and rages with greater violence. The remarkable ſymptoms which attend it, are a hoarſeneſs of the voice, the heart-burn, a continual loathing of food, a vomiting of porraceous bilious matter, the hiccup, a hot and feveriſh diſtemperature, reſtleſſneſs, &c.

As to the method of cure, it appears from what has been ſaid, that the cauſes of this affection are ſurpriſingly various; and

And it may be inferred, that the manner of treatment ought to be varied in a way suitable to the difference of the causes, whence the pain of the intestines proceeds. When from a suppression of the customary flux of the hæmorrhoids, or menses, especially in bodies abounding with blood, there arises a violent pain of the abdomen, attended with much heat, &c. a vein should be opened in the foot, then emollient clysters, antispasmodic powders, with a small portion of nitre, cinnabar, and castor should be used, and the feet bathed; and, under a remission of the fit, care should be taken to restore the menses in women, and the hæmorrhoids in men, to their natural courses. When the pain of the intestines proceeds from a redundance of intemperate and caustic bile, the same remedies are of service.

But what exceeds these and all other remedies in this case, is a nitrous powder, mixed with a drop or two of the true distilled oil of millefolium, to be taken in three or four ounces of the water of common chamomile flowers.

If the pain be tensive, and fixed in the right or left hypochondrium, or beneath the stomach, it is a sure sign that the disorder proceeds from flatulencies, or excrements inclosed within the flexures of the colon. In this case, the principal indication directs us to the use of clysters of an emollient, discutient, and corroborating quality, not omitting external applications of carminative and emollient liniments to the affected part.

When the rectum and part of the colon are affected with a strong convulsive stricture, so as to be incapable of transmitting either flatus or fæces, and a clyster cannot conveniently be introduced, the abdomen is to be fomented, all over, with hot and rich oils, by coction, particularly those of chamomile, dill, or rue, boiled with the fats of a badger, dog, fox, beaver, &c. which may be introduced, if possible, into the belly by clysters.

A flatulent colic, proceeding from imbecillity, and want of a due tone of the stomach and intestines, admits of the use of carminative things somewhat hotter than ordinary. Among these are spirituous carminative waters, prepared of the seeds of cumin and caraway, orange-peel, and the flowers of common roman chamomile and cardamums, distilled in wine.

COLIPHIUM, in antiquity, bread mixed with new cheese and roasted flesh, a composition which Pythagoras recommended to the use of wrestlers, in order to make them strong and firm fleshed, whereas formerly they used figs.

COLIR, an officer in China, who may properly be called an inspector, having an eye over what passes in every court or tribunal of the empire; and though he is not of the number himself, yet he assists at all assemblies, the proceedings whereof are communicated to him.

In order to render him impartial, he is kept independent, by having the post for life. The power of the colirs is such, that they make even the princes of the blood tremble.

COLISEUM, or COLISÆUM, in antient architecture, an oval amphitheatre at Rome, built by Vespasian, wherein were statues set up, representing all the provinces of the empire: in the middle whereof stood that of Rome, holding a golden apple in her hand.

This structure was so large, that it would hold near 100,000 spectators.

When Titus dedicated it, he sacrificed above 4000 beasts of different kinds.

COLLAR, *collare*, in roman antiquity, a sort of chain put generally round the neck of slaves that had ran away, after they were taken, with an inscription round it, intimating their being deserters, and requiring their being restored to their proper owners, &c.

COLLAR, in a more modern sense, an ornament consisting of a chain of gold, enamelled, frequently set with cyphers or other devices, with the badge of the order hanging at the bottom, wore by the knights of several military orders over their shoulders, on the mantle, and its figure drawn round their armories.

Thus, the collar of the order of the garter, consists of S S, with roses enamelled red, with a garter enamelled blue, and the George at the bottom.

Knights of the COLLAR, a military order in the republic of Venice, called also the order of St. Mark, or the medal.

It is the doge and the senate that confer this order; the knights bear no particular habit, only the collar, which the doge puts around their neck, with a medal, wherein is represented the winged lion of the republic.

COLLAR *of a ship*, a rope fastened about her beak head, into which the dead man's eye is seized, that holds her main stay.

Also the rope which is wound about the main-

main-maſt head, to ſave the ſhrouds from galling, is alſo called a collar.

COLLAR-BEAM, in architecture, a beam framed croſs betwixt two principal rafters.

COLLAR *of a plough*, an iron ring fixed on the middle of the beam, wherein are inſerted the tow and bridle chains. See the article PLOUGH.

COLLAR *of a draught horſe*, a part of harneſs made of leather and canvas, and ſtuffed with ſtraw or wool, to be put about the horſe's neck.

COLLATERAL, in geography, any thing, place, country, &c. ſituated by the ſide of another.

COLLATERAL POINT, in coſmography, the intermediate points; or thoſe between the cardinal points.

The collateral points are either primary, which are thoſe removed by an equal angle on each ſide from two cardinal points; or ſecondary, which, again, are either thoſe of the firſt or ſecond order. The firſt are thoſe that are equally diſtant from a cardinal point, and firſt primary; The latter equally diſtant from ſome cardinal and primary, and firſt ſecondary.

COLLATERAL WINDS, are thoſe blowing from collateral points. See WIND.

COLLATERAL, in genealogy, thoſe relations which proceed from the ſame ſtock, but not in the ſame line of aſcendants or deſcendants, but being, as it were, aſide of each other.

Thus uncles, aunts, nephews, nieces and couſins, are collaterals, or in the ſame collateral line: thoſe in a higher degree, and nearer the common root, repreſent a kind of paternity with regard to thoſe more remote.

COLLATERAL, in a legal ſenſe, is taken for any thing that hangeth by the ſide of another, whereto it relates; as a collateral aſſurance is that inſtrument which is made over and above the deed itſelf, for the performance of covenants, between man and man; thus called as being external, and without the nature and eſſence of the covenant.

COLLATION, in the canon law, the giving or beſtowing of a benefice on a clergyman by a biſhop, who has it in his own gift, or patronage.

This differs from preſentation, in that the latter is properly the act of a patron, offering the clerk to the biſhop, to be inſtituted into a benefice, whereas the former is the act of the biſhop himſelf. The collator can never confer a benefice on himſelf.

Antiently, the right of preſentation to all churches was in the biſhop; and now, if the patron neglects to preſent to the church, his right returns to the biſhop by collation. If the biſhop neglects to exerciſe his right of collation in ſix months, the archbiſhop may confer. If he neglect it for other ſix months, it falls to the crown.

In the romiſh church, the pope is the collator of all benefices, even elective ones, by prevention; ſetting aſide conſiſtorial benefices, and thoſe in the nomination of lay-patrons. In France the king is collator of all the benefices, whereof he is patron, except conſiſtorial ones, to which he has only the nomination; and the pope, by virtue of the concordat, is obliged to confer on whomſoever the king nominates.

COLLATION is alſo uſed in the romiſh church, for the meal or repaſt made on a faſt day.

COLLATION is alſo vulgarly uſed for a repaſt between dinner and ſupper.

COLLATION, in common law, the compariſon or preſentation of a copy to its original, to ſee whether or not it be conformable; or the report or act of the officer who made the compariſon. A collated act is equivalent to its original, provided all the parties concerned were preſent at the collation.

COLLATIONE *facta uni poſt mortem alterius*, a writ to the juſtices of the common-pleas, commanding them to iſſue their writ to the biſhop, for the admitting of a clerk in the place of another preſented by the king; ſuch other clerk, during the ſuit between the king and the biſhop's clerk, being dead.

COLLATIVE BENEFICES, are thoſe which are in the gift of the ordinaries, and within their own juriſdiction, in which caſe there need no preſentation, but the ordinary collates and inſtitutes the clerk, and ſends him to the archdeacon, or other perſon, whoſe office it is to induct him.

COLLEAGUE, a partner or aſſociate in the ſame office or magiſtrature. See the article ADJUNCT.

COLLECT, or COLLECTION, a voluntary gathering of money, or a tax raiſed by a prince for any pious deſign, or charitable purpoſe.

COLLECTS, in an eccleſiaſtical ſenſe, the ſhort

ſhort prayers into which the public devotions of the church are divided.

In the primitive church, the collects were repeated by the biſhop alone, after the joint prayers of the deacon and congregation: they were called by the Greeks συναξεις, becauſe they were a direct invocation of God by way of benediction, and not an exhortation to pray, which was the office of the deacon. That moſt of the collects of the liturgy of the church of England are very antient, appears from their conformity to the epiſtles and goſpels, which are thought to have been ſelected by St. Jerom; for which reaſon, many believe that the collects were likewiſe firſt framed by that father. In the year 492, Gelaſius, biſhop of Rome, ranged the collects, which were then uſed, into order, and added ſome new ones of his own; which office was again corrected by pope Gregory the great, whoſe ſacramentary contains moſt of the collects we now uſe: but our reformers examined the collects, corrected them, and reſtored ſeveral old ones, formerly left out.

COLLECTION, in logic, a term uſed by ſome for what is generally called ſyllogiſm. See the article SYLLOGISM.

COLLECTIVE, among grammarians, a term applied to a noun expreſſing a multitude, though itſelf be only ſingular; as an army, company, troop, &c. called collective nouns.

COLLECTOR, in general, denotes a perſon who gets or brings together things formerly diſperſed and ſeparated. Hence,

COLLECTOR, in matters of civil polity, is a perſon appointed by the commiſſioners of any duty, the inhabitants of a pariſh, &c. to raiſe or gather any kind of tax.

COLLECTOR, among botaniſts, one who gets together as many ſpecies of any kind of plant as he can, without ſtudying botany in a ſcientifical manner.

COLLEGATARY, in the civil law, a perſon who has a legacy left him in common with one or more other perſons.

If the thing be bequeathed in *ſolidò*, the portion of the deceaſed collegatory accrues to the reſt.

COLLEGE, *collegium*, an aſſemblage of ſeveral bodies or ſocieties, or of ſeveral perſons into one ſociety.

College, among the Romans, ſerved indifferently for thoſe employed in the offices of religion, of government, the liberal and even mechanical arts and trades; ſo that, with them, the word ſignified what we call a corporation or company.

Each of theſe colleges had diſtinct meeting-places or halls; and likewiſe, in imitation of the ſtate, a treaſury and common cheſt, a regiſter, and one to repreſent them upon public occaſions, and acts of government. Theſe colleges had the privilege of manumitting ſlaves, of being legates, and making by-laws for their own body, provided they did not claſh with thoſe of the government.

There are various colleges on foot among the moderns, founded on the model of thoſe of the antients. Such are the three colleges of the empire, *viz.*

COLLEGE *of electors, or their deputies*, aſſembled in the diet of Ratiſbon.

COLLEGE *of princes*, the body of princes, or their deputies, at the diet of Ratiſbon.

COLLEGE *of cities*, is, in like manner, the body of deputies which the imperial cities ſend to the diet. See the articles ELECTOR and DIET.

COLLEGE *of cardinals*, or the *ſacred* COLLEGE, a body compoſed of the three orders of cardinals. See CARDINAL.

COLLEGE is alſo uſed for a public place endowed with certain revenues, where the ſeveral parts of learning are taught. An aſſemblage of ſeveral of theſe colleges, conſtitutes an univerſity. The erection of colleges, is part of the royal prerogative, and not to be done without the king's licenſe.

The univerſity of Oxford conſiſts of nineteen colleges, and ſix halls; that of Cambridge, of twelve colleges, and four halls; and that of Paris, of fifty-four colleges, though, in reality, there is but ten where there is any teaching.

There were ſeveral colleges among the Jews, conſiſting generally of the tribe of Levi. The prophet Samuel ſeems to have made the uſe of them more public, and brought them under ſeveral regulations: he is ſaid to have founded the college of the prophets, &c.

As for the colleges of the chriſtians, the apoſtles and ſeventy diſciples, may not improperly be ſaid to be the firſt: afterwards St. Mark, the evangeliſt, is ſaid to have ſet up a public ſchool for reading, inſtruction, and interpretation of ſcripture at Alexandria. This ſchool produced a great many perſons eminent for their learning, as Clemens, Origen, Dionyſius, Athanaſius, &c.

Among the Greeks, the Lyceum and Academy,

Academy, were celebrated colleges: the latter of which has given its name to our univerſities, which in Latin are called *academiæ*.

The Romans came late into the inſtitution of ſuch colleges: they had, however, ſeveral founded by their emperors, eſpecially in Gaul, the chief of which were thoſe of Marſeilles, Lions, Beſançon, and Bourdeaux.

Colleges of this kind have been generally in the hands of thoſe devoted to religion. Thus the Magi in Perſia, the Gymnoſophiſts in the Indies, the Druids in Gaul and Britain, had the care of educating youth in the ſciences. After chriſtianity became eſtabliſhed, there were almoſt as many colleges as monaſteries; particularly in the reign of Charlemaigne, who, in his capitulars, enjoined the monks to inſtruct youth in muſic, grammar, and arithmetic: but this calling the monks from their ſolitude, and taking up too much of their time, the care of the college was at length put into the hands of ſuch as had nothing elſe to do.

In the canon law, it is ſaid, three perſons make a college. The colleges in London are,

COLLEGE *of civilians*, commonly called *Doctors-commons*, founded by Dr. Harvey, dean of the arches, for the profeſſors of the civil law reſiding in the city of London. The judges of the arches, admiralty, and prerogative court, with ſeveral other eminent civilians, commonly reſide here.

To this college belong thirty-four proctors, who make themſelves parties for their clients, manage their cauſes, give licenſes for marriages, &c.

In the common hall of Doctors-commons are held ſeveral courts, under the juriſdiction of the civil law, particularly the high court of admiralty, the court of delegates, the arches court of Canterbury, and the prerogative court of Canterbury, whoſe terms for ſitting are much like thoſe at Weſtminſter, every one of them holding ſeveral court days; moſt of them fixed and known by preceding holydays, and the reſt appointed at the judge's pleaſure.

COLLEGE *of phyſicians*, a corporation of phyſicians in London, whoſe number, by charter, is not to exceed eighty: The chief of them are called fellows, and the next candidates, who fill up the places of fellows as they became vacant by death, or otherwiſe. Next to theſe are the honorary fellows, and laſtly, the licentiates, that is, ſuch as being found capable, upon examination, are allowed to practiſe phyſic.

This college has ſeveral great privileges granted by charter and acts of parliament. No man can practiſe phyſic in, or within ſeven miles of London, without licenſe of the college, under the penalty of 5*l*. Alſo, perſons practiſing phyſic in other parts of England, are to have letters teſtimonial from the preſident and three elects, unleſs they be graduate phyſicians of Oxford or Cambridge. Every member of the college, is authoriſed to practiſe ſurgery in London, or elſewhere; and that they may be able at all times to attend their patients, they are freed from all pariſh offices.

The college is governed by a preſident, four cenſors, and twelve electors. The cenſors have, by charter, power to ſurvey, govern, and arreſt all phyſicians, or others, practiſing phyſic in or within ſeven miles of London; to fine, amerce, and impriſon them at diſcretion; to ſearch apothecaries ſhops, &c. in and about London; to ſee if their drugs, &c. be wholeſome, and the compoſitions according to the form preſcribed by the college in their diſpenſaries; and to burn, or otherwiſe deſtroy, thoſe that are defective or decayed, and not fit for uſe. They are judges of record, and not liable to action for what they do in their practice but by judicial powers; ſubject nevertheleſs to appeal to the college of phyſicians. However the college is not very rigorous in aſſerting its privileges, there being ſome of very good abilities who practiſe in London, &c. without their licenſe: yet, by law, if any perſon, not expreſsly allowed to practiſe, take upon him the cure of any diſeaſe, and the patient die under his hand, it is deemed felony in the practiſer.

In 1696, forty-two members of the college made a ſubſcription, to ſet on foot a diſpenſary for the relief of the ſick poor, who are adviſed gratis every day but Sunday, and medicines ſold at the intrinſic value: ſince this they have erected two other diſpenſaries.

Royal COLLEGE *of phyſicians*, is alſo a corporation of phyſicians in Edinburgh, erected by king Charles II. granting them, by patent under the great ſeal, ample juriſdiction within this city and liberties, commanding the courts of juſtice to aſſiſt them in the execution of their orders.

orders. These have the sole faculty of professing physic here, and hold conferences once a month for the improvement of medicine. This college consists of a president, two censors, a secretary, and the ordinary society of fellows, who, upon St. Andrew's day, if it falls on a Thursday, if not on the first Thursday after, elect seven counsellors, who chuse the president and the other officers for the ensuing year. By their charter the president and censors have power to convene before them all persons that presume to practise physic within the city of Edinburgh, or the liberties thereof, without the license of the college; and to fine them in five pounds sterling. They are also impowered to visit apothecaries shops, and examine apothecaries themselves; with several other rights and privileges.

Sion-COLLEGE, or the college of the London clergy, was formerly a religious house, next to a spittal, or hospital, and now it is a composition of both, *viz.* a college for the clergy of London, who were incorporated in 1631, at the request of Dr. White, under the name of the president and fellows of Sion College; and an hospital for ten poor men, the first within the gates of the house, and the latter without.

This college consists of a president, two deans, and four assistants, who are annually chosen from among the rectors and vicars in London, subject to the visitation of the bishop. They have one of the finest libraries in England, built and stocked by Mr. Simpson, chiefly for the clergy of the city, without excluding other students on certain terms; they have also a hall with chambers for the students, generally filled with the ministers of the neighbouring parishes.

Gresham-COLLEGE, or COLLEGE *of philosophy*, a college founded by Sir Thomas Gresham, who built the Royal-exchange, a moiety of the revenue whereof he gave in trust to the mayor and commonalty of London, and their successors, for ever, and the other moiety to the company of mercers; the first, to find four able persons to read in the college divinity, astronomy, music, and geometry; and the last, three or more able men to read rhetoric, civil law, and physic; a lecture upon each subject is to be read in term-time, every day, except Sundays, in Latin, in the forenoon, and the same in English in the afternoon; only the music lecture is to be read alone in English. The lecturers have each 50 *l. per annum*, and a lodging in the college.

In this college formerly met the royal society, that noble academy, celebrated throughout the world for their improvements in natural knowledge. See the article SOCIETY.

COLLEGE *of heralds*, or COLLEGE *of arms*, commonly called the *heralds office*, a corporation founded by charter of king Richard the third, who granted them several privileges, as to be free from subsidies, tolls, offices, &c. They had a second charter from king Edward the sixth, and a house built near Doctors-commons, by the earl of Derby, in the reign of king Henry the seventh, was given them by the duke of Norfolk, in the reign of queen Mary, which house is now rebuilt. This college is subordinate to the earl marshal of England. They are assistants to him in his court of chivalry, usually held in the common hall of the college, where they sit in their rich coats of his majesty's arms. See the article HERALD.

COLLEGE *of heralds* in Scotland. The principal person in the scottish court of honour is lyon king at arms, who has six heralds and six pursuivants, and a great number of messengers at arms under him, who, together, make up the college of heralds. The lyon is obliged to hold two peremptory courts in the year, at Edinburgh, on the 6th of May and the 6th of November, and to call officers of arms and their cautioners before him upon complaints; and if found culpable upon trial, to deprive and fine them and their cautioners. Lyon and his brethren the heralds have power to visit the arms of noblemen and gentlemen, and to distinguish them with differences, to register them in their books, as also to inhibit such to bear arms as by the law of arms ought not to bear them, under the pain of escheating to the king the thing whereon the arms are found, and of a hundred marks Scots to lyon and his brethren; or of imprisonment during lyon's pleasure. The college of heralds are the judges of the malversation of messengers, whose business is to execute summonses and letters of diligence for civil debt, real or personal.

COLLEGES *of common law*. See the article INNS *of court and chancery*.

Besides these colleges, we have three charitable foundations for learning, called colleges, *viz.* Winchester, Eaton, and Westminster.

COLLEGES *for diſabled ſoldiers, ſailors, &c.* See the article HOSPITAL.

COLLEGIAL, or COLLEGIATE. See the article COLLEGIATE.

COLLEGIANS, in church-hiſtory, religious ſocieties, or clubs, among the Dutch, conſiſting of perſons of various profeſſions, but all agreeing that the ſcriptures are the writings of men inſpired. Theſe meetings are eſtabliſhed in ſeveral towns of Holland, Frieſland, Weſt Frieſland, and particularly at Rinſburg, a village near Leyden, where they meet twice a week. In theſe clubs every one has a right to ſpeak his own ſentiments, whether he be a churchman or a layman.

COLLEGIATE CHURCHES, thoſe which tho' no biſhop's ſee, yet have the retinue of the biſhop, the canons and prebends. Such are, among us, Weſtminſter, Windſor, Rippon, Wolverhampton, Southwell, Mancheſter, *&c.* governed by deans and chapters. See the articles DEAN and CHAPTER.

There are two kinds of theſe collegiate churches, ſome of royal foundation, others of eccleſiaſtical foundation: each of them, in matters of divine ſervice, are regarded in the ſame manner as cathedrals. There are even ſome collegiate churches which have epiſcopal rights; ſome of theſe churches were antiently abbies, which in time were ſecularized.

COLLEGIATE AUDITORS. See AUDITOR.

Vergers of COLLEGIATE CHURCHES. See the article VERGER.

COLLEMA, in botany, a genus of moſſes, conſiſting merely of a gelatinous matter, reſembling boiled glue or ſize This is ſometimes diſpoſed in form of filaments, ſometimes of membranes, and ſometimes of neither, but perfectly ſhapeleſs. No part of fructification has ever yet been diſtinguiſhed in any of the ſpecies of this genus.

COLLET, among jewellers, denotes the horizontal face or plane at the bottom of brilliants.

COLLET, in glaſs making, is that part of glaſs veſſels which ſticks to the iron inſtrument wherewith the metal was taken out of the melting pot: theſe are afterwards uſed for making green glaſs.

COLLETICS, *colletica*, in pharmacy and ſurgery, denote much the ſame with agglutinants, or vulneraries. See the article VULNERARY.

COLLINSONIA, in botany, a genus of the diandria-monogynia claſs of plants, whoſe corolla conſiſts of a ſingle, unequal petal; the tube is of a conico-cylindraceous ſhape, and is much larger than the cup; the limb is quadrifid and erect; one of the ſegments very long, and divided to the middle into other ſmaller, ramoſe and capillary laciniæ: the ſegment oppoſite to this is very ſmall, emarginated and acute; the lateral ones are oppoſite to one another, and are erect, entire, and very ſmall.

There is no pericarpium; (that ever Linnæus obſerved) the ſeed is ſingle, of a globular figure, and is contained in the bottom of the cup.

COLLIQUAMENTUM, in natural hiſtory, an extreme tranſparent fluid in an egg, obſervable after two or three days incubation, containing the firſt rudiments of the chick. It is included in one of its own proper membranes, diſtinct from the albumen. Harvey calls it the oculus.

COLLIQUATON, in chemiſtry, is applied to animal, vegetable, and mineral ſubſtances, tending towards fuſion. See the article FUSION.

COLLIQUATION, in phyſic, a term applied to the blood, when it loſes its craſs or balſamic texture; and to the ſolid parts, when they waſte away, by means of the animal fluids flowing off through the ſeveral glands, and particularly thoſe of the ſkin, faſter than they ought; which occaſions fluxes of many kinds, but moſtly profuſe, greaſy, and clammy ſweats. The curative intention in this caſe is, the giving a better conſiſtence by balſamics and agglutinants to the blood, and the hardening of the ſolids by ſubaſtringents.

COLLIQUATIVE FEVER, in phyſic, a fever attended with a diarrhœa, or profuſe ſweats, proceeding from colliquation. See COLLIQUATION.

COLLISEUM, or COLISEUM. See the article COLISEUM.

COLLISION, the ſtriking of one hard body againſt another; or the friction or percuſſion of bodies moving violently with different directions, and daſhing againſt each other. See PERCUSSION.

COLLUM, the ſame with neck. See the articles NECK and CERVIX.

COLLUSION, in law, a ſecret underſtanding between two parties, who plead or proceed fraudulently againſt each, to the other prejudice of a third perſon.

In the canon law, colluſion in matters of benefices vacates the benefice, and incapacitates the perſon from holding any benefice at all.

COLLUTHIANS, in church-hiſtory, a religious ſect which aroſe in the ſixth century, on occaſion of the indulgence ſhewn to Arius by Alexander, patriarch of Alexandria: they held that God was not the author of the evils and afflictions of this life, *&c.*

COLLYRIDIANS, in church-hiſtory, a ſect of antient heretics, who paid divine honours to the virgin Mary, offering her little cakes called *collyrida*.

COLLYRIUM, in pharmacy, a topical remedy for diſorders of the eyes; deſigned to cool and repel hot, ſharp humours, which they do more effectually, if aſſiſted by the inward uſe of diuretics at the ſame time.

They are generally of two kinds, the one liquid, and the other dry: liquid collyrias are compoſed of ophthalmic powders in water, as roſe-water, plantain-water, or that of fennel, eye-bright, *&c.* wherein tutty, white vitriol, or ſome other proper powder is diſſolved.

The dry collyrium is troches of rhaſis, ſugar-candy, tutty prepared, *&c.* blown into the eye.

COLOCYNTHIS, in botany, the plant which produces the coloquintida of the ſhops, and uſually called bitter-apple: this, according to Tournefort, makes a diſtinct genus, but is comprehended by Linnæus under the cucumis, or cucumber-kind. See the articles CUCUMIS and COLOQUINTIDA.

COLOGNE, the capital of the circle of the lower Rhine, in Germany, ſituated on the Rhine, about forty-five miles eaſt of Maeſtricht: eaſt longitude 6° 40′, north latitude 50° 50′.

It is one of the largeſt and moſt elegant cities of Germany, being the ſee of an archbiſhop, who is one of the electors of the empire, and has a yearly revenue of 130,000*l.* ſterling.

COLOGNE *earth*, a ſubſtance uſed in painting, much approaching to amber in its ſtructure, and of a deep brown. It has generally been eſteemed a genuine earth, but has been diſcovered to contain a great deal of vegetable matter, and, indeed, is a very ſingular ſubſtance.

It never conſtitutes an entire ſtratum in the earth, but is lodged among other ſtrata in large flat detached maſſes. It is moderately dry, while in the earth, and of a ſoft crumbly texture. When dried, it is of a deep, duſky brown, of a very cloſe, compact, and fine ſtructure, and very remarkably light; it is of a ſmooth, even ſurface, dry, but not harſh to the touch, crumbles eaſily to pieces between the fingers, and ſlightly ſtains the hands; it adheres firmly to the tongue, and is of a very auſtere and aſtringent taſte, but not at all reſembling the aſtringency of the boles, or any thing elſe of the mineral kingdom, but plainly reſembling the taſte of oak bark. It makes no effervescence with acids; if thrown into water, it ſwims on the ſurface, till thoroughly wetted; and if brought into contact with burning coals, it takes fire, and burns of itſelf, till reduced to yelloviſh aſhes.

It is eaſy to diſcern from this account, that though this is generally eſteemed an earth, and known to the world by no other name, it is no pure native foſſile, but contains more vegetable, than mineral matter, and owes its origin to the remains of wood which has been long buried in the earth. It is dug in Germany and France: the quantities conſumed in painting, in London, are brought from Cologne, where it is found very plentifully; but our own kingdom is not without it, it being found near Birmingham, and on Mendip-hills, in Somerſetſhire; but what has been yet found there is not ſo pure or fine, as that imported from Cologne.

COLON, in anatomy, the ſecond of the three large inteſtines, called inteſtina craſſa.

The ſituation of this is at the circumference of the ſmall inteſtines, and is uſually convoluted and flexuous, variouſly, in a ſtrange manner. Its beginning is above the termination of the ilium, and its end at the os ſacrum. It is connected with the os ilii, the right kidney, the gall-bladder, the liver, the ſtomach, the ſpleen, and finally with the left kidney. Its length is from five to ſeven ſpans; its diameter is the greateſt of that of any inteſtine. It has three ligaments terminating in the vermiform proceſs that runs longitudinally in it. It has alſo certain external adipoſe appendiculæ, which ſerve to lubricate it. The connivent valves are larger in this than in any other of the guts, and the coats it is compoſed of are ſtronger than in the ſmall guts.

COLON, in grammar, a point or character marked thus, (:) ſhewing the preceding ſentence to be perfect or intire; only that ſome remark, farther illuſtration, or other matter connected therewith,

is ſubjoined. See the articles POINTING, PERIOD, COMA, &c.

According to a late ingenious author, the colon differs from the ſemicolon, &c. in ſerving to diſtinguiſh thoſe conjunct members of a ſentence which are capable of being divided into other members; whereof one, at leaſt, is conjunct.

COLONEL, in military matters, the commander in chief of a regiment, whether horſe, foot, or dragoons.

A colonel may lay any officer of his regiment under arreſt, but muſt acquaint the general with it; he is not allowed a guard, only a centry from the quarter-guard.

COLONEL-LIEUTENANT, he who commands a regiment of guards, whereof the king, prince, or other perſon of the firſt eminence, is colonel.

Theſe colonel-lieutenants have always a colonel's commiſſion, and are uſually general officers.

Lieutenant-COLONEL, the ſecond officer in a regiment, who is at the head of the captains, and commands in the abſence of the colonel.

COLONNA, a town of Italy, in the Campagnia of Rome, eighteen miles eaſtward of that city: eaſt longitude 13° 15′, north latitude 42°.

COLONNADE, in architecture, a periſtyle of a circular figure: or a ſeries of columns diſpoſed in a circle, and inſulated within ſide. See PERISTYLE.

Such is that of the little park at Verſailles, conſiſting of thirty-two ionic columns, all of ſolid marble, and without incruſtation.

A polyſtyle COLONNADE, is that whoſe numbers of columns is too great to be taken in by the eye at a ſingle view. Such is the colonnade of the palace of St. Peter's, at Rome, conſiſting of 284 columns of the doric order, each above four foot and an half diameter, all in tiburtine marble.

COLONY, *colonia*, a company of people tranſplanted into a remote province, in order to cultivate and inhabit it.

Colonies are of three ſorts: the firſt are thoſe that ſerve to eaſe and diſcharge the inhabitants of a country, where the people are become too numerous; the ſecond are thoſe eſtabliſhed by victorious princes in the middle of vanquiſhed nations, to keep them in awe and obedience; and the third ſort are thoſe eſtabliſhed for the promotion of trade, called colonies of commerce; ſuch are thoſe eſtabliſhed by european nations in ſeveral parts of Aſia, Africa, and America.

It has been a matter of doubt with ſome, whether our colonies in America have not proved prejudicial to Great Britain. It is agreed, that their colonies in America have proved highly detrimental to the Spaniards: owing to the nature of their government; as the inquiſition frights away ſtrangers; as their monaſteries prevent marriages; and as there is no proviſion at all to repair what their colonies drain them of: whereas the Hollanders, who ſend out greater numbers every year than the Spaniards, are not depopulated by it: their conſtitution inviting more over to them than they ſend abroad; and in the britiſh colonies, all foreigners may be made denizens, for an inconſiderable charge; whereby many of all nations are encouraged to ſettle and plant in our Indies, whence the crown gains ſubjects of them and their poſterity, and to the nation accrues wealth by their labour and induſtry. There is reaſon to think that, for ſome years, the plantations have ſent of their offſpring, and the perſecutions abroad have brought us as much people as the colonies have drained us of. Wherefore we may ſafely advance, that our trade and navigation are greatly increaſed by our colonies; and that they really are a ſource of treaſures and naval power to this kingdom, ſince they work for us, and their treaſures center here. See the article PLANTATION.

COLOPHONY, in pharmacy, black reſin, or turpentine, boiled in water, and afterwards dried; or which is ſtill better, the caput mortuum remaining after the diſtillation of the etherial oil, being further urged by a more intenſe and long continued fire.

When colophony, thus prepared, is treated with a fire of ſuppreſſion, it yields a thick oil along with a heavy, acid water, which diſcovers the nature and genuine properties of a reſin. Whatever virtues therefore colophony is poſſeſſed of, may be aſcribed to the energy of theſe two principles, combined and blended into one common ſubſtance. Colophony reduced to powder, is of ſingular advantage in ſurgery, in caſes where the bones are laid bare, or the periоſteum, tendons and muſcles injured by burns, corroſions, contuſions, punctures, lacerations, or partial diviſions. It alſo pre-

vents

vents defluctions of ſerum on the joints, and induces cicatrices, and checks the fungous excreſcences of ulcers, if applied in the ſame manner. Beſides its drying, conſolidating, and lenitive qualities, it is an ingredient in ſeveral plaſters and ointments.

COLOQUINTIDA, COLOCYNTH, *colocynthis*, in pharmacy, the fruit of the plant colocynthis. See COLOCYNTHIS. It is ſent to us dried, or cleanſed of its outer bark, which is yellowiſh, and tough, and of the thickneſs of a ſhilling, or a little more: it ought to be choſen dry, light, and tough, of a good bright colour, and not duſty.

Coloquintida has been known in medicine from the earlieſt times as one of the ſtrongeſt purges we are acquainted with: it is ſent us from Syria, particularly from Aleppo. Coloquintida diſtilled with water, in the common way, with an alembic, affords an inſipid, inodorous liquor, not at all purging: but being fermented and diſtilled, it yields a ſpirituous liquor that purges ſtrongly. All the medical writers, from Hippocrates down to the lateſt times, give it the character of the moſt powerful known hydragogue, and it has been preſcribed in pains of the limbs, head-achs of the worſt kinds, obſtructions of the viſcera, and terrible cutaneous foulneſſes; as alſo in dropſies with great ſucceſs: but it is to be given with great caution. In large doſes it is ſo violent in its operation, that it has like to have been excluded the materia medica as a poiſon. If it brings an hypercatharſis and convulſions, the readieſt way of relieving the patient is by giving oil in conſiderable quantities, as well by the mouth, as in clyſters. It is ſcarce ever preſcribed ſingly, at this time. It is an ingredient in the pillulæ cocciæ, and, though in a very large proportion, is never found to do any hurt there.

COLOR, or COLOUR. See COLOUR.

COLORATION. See the article COLORIZATION.

COLORATURA, in muſic, denotes all manner of variations, trillos, diminutions, &c. ſerving to make a ſong agreeable.

COLORIZATION, or COLORATION, in pharmacy, a term ſometimes uſed for the changes of colour which bodies undergo, whether by calcination, coction, fermentation, &c.

COLOSSUS, a ſtatue of a gigantic, or enormous ſize.

The moſt famous of this kind was the coloſſus of Rhodes, made, in honour of Apollo, by Chares the diſciple of Lyſippus. It was eighty-ſix feet high, and its thumb ſo large, that few people could fathom it. This ſtatue was placed acroſs the mouth of the harbour at Rhodes, and the ſhips with full ſails paſſed betwixt its legs.

COLOSTRUM, or COLOSTRA, in medicine, the firſt milk of any animal after bringing forth young, called beeſtings. It is remarkable that this milk is generally cathartic, and purges off the meconium; thus ſerving both as an aliment and medicine.

An emulſion prepared with turpentine, diſſolved with the yolk of an egg, is ſometimes called by this name.

COLOUR, or COLOR, in phyſiology, an inherent property in light, exciting different vibrations, according to the different magnitude of its parts, in the fibres of the optic nerve, which being propagated to the ſenſorium, affect the mind with different ſenſations: or, according to others, it is only the reflection of light, variouſly changed by opake bodies, or even light itſelf.

The philoſophers before Sir Iſaac Newton's time ſuppoſed that all light, in paſſing out of one medium into another of different denſity, was equally refracted in the ſame or like circumſtances: but that great philoſopher hath diſcovered, that it is not ſo; but "That there are "different ſpecies of light; and that "each ſpecies is diſpoſed both to ſuffer a "different degree of refrangibility in "paſſing out of one medium into another, "and to excite in us the idea of a differ-"ent colour from the reſt; and that bo-"dies appear of that colour which ariſe "from the compoſition of the colours the "ſeveral ſpecies they reflect are diſpoſed "to excite."

There are abundance of experiments for the confirmation of this doctrine, among which the following will ſerve ſufficiently to illuſtrate the propoſition, and evince the truth of it. And,

Firſt, There are different ſpecies of light, and each ſpecies is diſpoſed to ſuffer a different degree of refrangibility, and to excite the idea of a different colour. To ſhew this, let a room be darkened, and the ſun permitted to ſhine into it thro' a ſmall hole in the window-ſhutter, and be made to fall upon a glaſs priſm: then

then will the ſun's light, in paſſing through this priſm, ſuffer different degrees of refraction, and, by that means, be parted into different rays; which rays, being received upon a clean white paper, will exhibit the following colours, *viz.* red, orange, yellow, green, blue, indigo, and a violet purple. Thus let AB (plate XLVI. fig. 1.) repreſent the window-ſhutter, C, the hole in it, DEF, the priſm, ZY, a ray of light coming from the ſun, which paſſes through the hole, and falls upon the priſm at Y, and if the priſm were removed, it would go on to X; but in entering its firſt ſurface EF, ſhall be refracted into the courſe YW, fall upon the ſecond in W, where in going out into the air it ſhall be refracted again. Let the light now, after it has paſſed the priſm, be received upon a ſheet of white paper GHIK held at a proper diſtance, and it will exhibit upon the paper a picture or image at LM, of an oblong figure, whoſe ends are ſemicircular, and ſides ſtraight; and it ſhall be variegated with colours after the following manner.

From the extremity M, to ſome length, ſuppoſe to the line *n o*, it ſhall be of an intenſe red; from *n o* to *p q*, it ſhall be of an orange colour; from *p q* to *r s*, it ſhall be yellow; from thence to *t u*, it ſhall be green; from thence to *w x*, blue; from thence to *y z*, indigo; and from thence to the end, violet. And if the whole image be divided lengthwiſe into 360 equal parts, the red ſhall take up 45 of them; the orange, 27; the yellow, 48; the green, 60, the blue, 60; the indigo, 40; and the violet, 80.

There are ſeveral experiments made which ſhew that the diſpoſitions of the rays of light, to produce ſome one colour, and ſome another, are not wrought by any action of the priſm upon them, but are originally inherent in thoſe rays; and that the priſm only affords each ſpecies an occaſion of ſhewing its diſtinct quality, by ſeparating them, one from the other, which before, while they were blended together in the unrefracted light of the ſun, lay concealed. See the articles LIGHT, REFLECTION, REFRACTION, and RAY.

From this doctrine it is clear, that each ſpecies of rays is diſpoſed to excite in us the idea of a different colour; and that this is the caſe, is confirmed by what follows, *viz.* That whatever ſpecies of rays are thrown upon any body, they make that body appear of their own colour. Thus minium in red light, appears of its own colour; but in yellow light, it appears yellow; and in green light, it appears green; in blue, blue; and in violet-purple coloured light, it appears of a purple colour. In like manner, verdigreaſe will put on the appearance of that colour in which it is placed: but each of theſe bodies appears moſt luminous and bright when enlightened with its own colour, and dimmeſt in ſuch as are moſt remote from that. It is certain, therefore, that each ray is diſpoſed to excite its own colour, which is neither to be altered by refraction nor reflection. This much in confirmation of the firſt part of the propoſition; and now we proceed to the ſecond part, *viz.* That bodies appear of that colour, which reſults from a compoſition of thoſe colours, which the ſeveral ſpecies they reflect are diſpoſed to excite. We will therefore proceed to ſhew, that other colours may be produced from a mixture of thoſe ſeven already mentioned, which rays of light, when ſeparated by a priſm, are diſpoſed to exhibit. From whence it will be rational to conclude, that bodies appear of that colour, which ariſes from the mixture of thoſe which they reflect.

All the priſmatic colours mixed together appear white, a little inclining to yellow, ſuch as is that of the light of the ſun.

To ſhew this, let a convex lens be placed between the priſm and the paper which receives the image, (*id. ibid.*) in order that the rays ſeparated by it may be collected into a focus; and let the focus fall upon the paper: then will the ſpot where it falls appear white; and if we remove the paper from the focal point, the ſame coloured image will be exhibited, but inverted, becauſe the rays croſs each other in the focus. But if the rays of any particular colour be intercepted before they are collected in the ſaid ſpot, it then not only appears of a different colour from what it did before, but different from any of the priſmatic colours taken ſeparately.

No compoſition of theſe colours will produce black; that being no colour, but the defect or abſence of all colour whatever. What it is gives bodies this power of reflecting ſome one ſort of rays moſt copiouſly, and ſome another, is probably nothing elſe than the different magnitude of the particles whereof they are compoſed: this Sir Iſaac Newton thinks a probable ground for conjecturing about the magnitude

tude of the conſtituent particles of bodies. The green of vegetables he takes to be of the third order, as likewiſe the blue of ſyrup of violets: the azure colour of the ſky he takes to be of the firſt order, as alſo the moſt intenſe and luminous white; but if it is leſs ſtrong, he then conjectures it to be a mixture of the colours of all orders. Of the latter ſort he takes the colour of linen, paper, and ſuch like ſubſtances to be; but white metals to be of the former ſort. For producing black, the particles muſt be ſmaller than for exhibiting any of the colours.

But that ſome bodies reflect one ſort of rays moſt copiouſly, and ſome another, from no other reaſon than the different magnitude of their conſtituent particles, will appear hence:

If water be prepared with ſoap, ſo as to render it ſufficiently tenacious, and then blown up into a bubble, it is obſervable, that as the bubble grows thinner and thinner (as it will do by reaſon of the water's continually running down from the top of it, till it breaks) different colours will ariſe, one after another, at the top of the bubble, ſpreading themſelves into rings, and deſcending till they vaniſh at the bottom, in the ſame order as they roſe at the top. Thus, in an experiment of this kind, tried by Sir Iſaac Newton, the colours aroſe in this order, firſt red, then blue; to which ſucceeded red a ſecond time, and blue immediately followed; after that, red a third time, ſucceeded by blue; to which followed a fourth red, but ſucceeded by green; after this a more numerous order of colours, firſt red, then yellow, next green, and after blue, and at laſt purple; then again red, yellow, green, blue, and violet followed each other; and the laſt order of colour that aroſe was red, yellow, white, and blue; to which ſucceeded a dark ſpot that afforded ſcarce any light, though it was obſerved to cauſe ſome very obſcure reflection, for the image of the ſun or candle might be faintly diſcerned in it; and this laſt ſpot ſpread itſelf more and more till the bubble broke.

COLOUR, in painting, is applied both to the drugs, and to the tints produced by thoſe drugs variouſly mixed and applied.

The principal colours uſed by painters are red and white lead, or ceruſs; yellow and red ochres; ſeveral kinds of earth, umbre, orpiment, lamp-black, burnt ivory, black lead, cinnabar or vermillion, gumboge, lacca, blue and green aſhes, verdigriſe, biſtre, bicce, ſmalt, carmine, ultramarine: each of which, with their uſes, &c. are to be found under their proper articles.

Of theſe colours ſome are uſed tempered with gum-water, ſome ground with oil, others only in freſco, and others for miniature.

Painters reduce all the colours they uſe under theſe two claſſes, of dark and light colours: dark colours are black, and all others that are obſcure and earthy, as umbre, biſtre, &c.

Under light colours are comprehended white, and all that approach neareſt to it.

Painters alſo diſtinguiſh colours into ſimple and mineral.

Under ſimple colours they rank all thoſe which are extracted from vegetables, and which will not bear the fire; as the yellow, made of ſaffron, french berries, lacca, and other tinctures extracted from flowers uſed by limners, illuminers, &c.

The mineral colours are thoſe which being drawn from metals, &c. are able to bear the fire, and therefore uſed by enamellers. Changeable and permanent colours is another diviſion, which, by ſome, is made of colours.

Changeable colours are ſuch as depend on the ſituation of the objects with reſpect to the eye, as that of a pigeon's neck, taffeties, &c. the firſt however being attentively viewed by the microſcope, each fibre of the feathers appears compoſed of ſeveral little ſquares, alternately red and green, ſo that they are fixed colours.

Local COLOURS. See the article LOCAL.

Water COLOURS. See the article WATER.

COLOUR, in dying. There are, in the art of dying, five colours, called ſimple, primary, or mother colours, from the mixture of which all other colours are formed; theſe are blue, yellow, brown, red, and black. Of theſe colours, variouſly mixed and combined, they form the following colours, panſy, blue, and red; from the mixture of blue and ſcarlet are formed amaranth, violet, and panſy; from the ſame mixture of blue, crimſon, and red, are formed the columbine or dove-colour, purple-crimſon, amaranth, panſy, and crimſon-violet.

Here it is to be obſerved that they give the name crimſon to all colours made with cochineal.

Of blue and red madder is died purple, pepper colour, tan-colour, and dry-roſe colour.

The ſame blue with red half in grain, make,

makes amaranth, tan-colour, and dry-roſe-colour.

Blue and half red-crimſon, compoſe amaranth, tan-colour, dry-roſe, a brown panſy, and ſun brown.

Blue and yellow, mixed together, compoſe a yellow-green, ſpring-green, graſs-green, laurel-green, brown-green, dark-green; as well as ſea-green, parrot-green, cabbage green, *&c.* Theſe three laſt colours are to be leſs boiled than the reſt. It is to be noted, that as to green, there is no ingredient or drug in nature that will dye it; but the ſtuffs are dyed twice, firſt in blue, then in yellow.

Blue and brown. Theſe two colours are never mixed alone, but with the addition of red, either of madder or cochineal: they form ſeveral colours.

Red and yellow. All the ſhades compoſed of theſe two colours, as gold, yellow, aurora, marygold, orange, nacarat, granat-flower, flame colour, *&c.* are made with yellow and red of madder, ſcarlet being leſs proper as well as too dear.

Red and brown. Of theſe two colours are formed cinnamon-colour, chetnut, muſk, bear's hair, and even purple, if the red be of madder.

Yellow and brown. The colours formed from theſe two, are all the ſhades of feuille-mort, and hair-colours. But this may be taken notice of, that though it be ſaid that there are no colours or ſhades made from ſuch and ſuch mixtures, it is not meant that none can be made, but that they are more eaſily formed from a mixture of other colours.

COLOUR, in heraldry. The colours generally uſed in heraldry are red, blue, black, green, and purple, which the heralds call gules, azure, ſable, vert or ſinople, and purpure; tenne or tawny, and ſanguine, are not ſo common: as to yellow and white, called or and argent, they are metals not colours.

The metals and colours are ſometime expreſſed in blazon by the names of precious ſtones, and ſometimes by thoſe of planets or ſtars. See BLAZONING.

Oenomaus is ſaid to have firſt invented the diſtinction of colours, to diſtinguiſh the gundillæ of combatants of the circenſian games; the green for thoſe who repreſented the earth, and blue for thoſe who repreſented the ſea.

COLOUR, in law, ſome probable plea, though really falſe in itſelf, and only calculated to draw the trial of the cauſe from the jury to the judge; for which reaſon it ought to be matter in law, or doubtful to the jurors.

COLOUR *of office*, ſignifies ſome unjuſt action done under countenance of an office, and is oppoſed to *virtute officii*, which implies a man's doing a right and juſt thing in the execution of his office.

COLOURS, in the military art, include the banners, flags, enſigns, *&c.* of all kinds, borne in the army or fleet. See the articles FLAG and STANDARD.

COLOUR-GOURD. See the article GOURD.

Field-COLOUR. See the article FIELD.

COLOURS, in the latin and greek churches, are uſed to diſtinguiſh ſeveral myſteries and feaſts, celebrated therein.

Five colours only are regularly admitted into the latin church; theſe are white, green, red, violet, and black: the white is for the myſteries of our Saviour, the feaſts of the virgin, thoſe of the angels, ſaints, and confeſſors; the red is for the myſteries and ſolemnities of the holy ſacrament, the feaſts of the apoſtles and martyrs; the green for the time between pentecoſt and advent, and from epiphany to ſeptuageſima; the violet in advent and chriſtmas, in vigils, rogations, *&c.* and in votive maſſes in time of war; laſtly, the black is for the dead, and the ceremonies thereto belonging.

In the greek church, the uſe of colours is almoſt aboliſhed, as well as among us: red was, in the greek church, the colour for chriſtmas, and the dead, as black among us.

To COLOUR *ſtrangers goods*, is when a freeman allows a foreigner to enter goods at the cuſtom-houſe in his name.

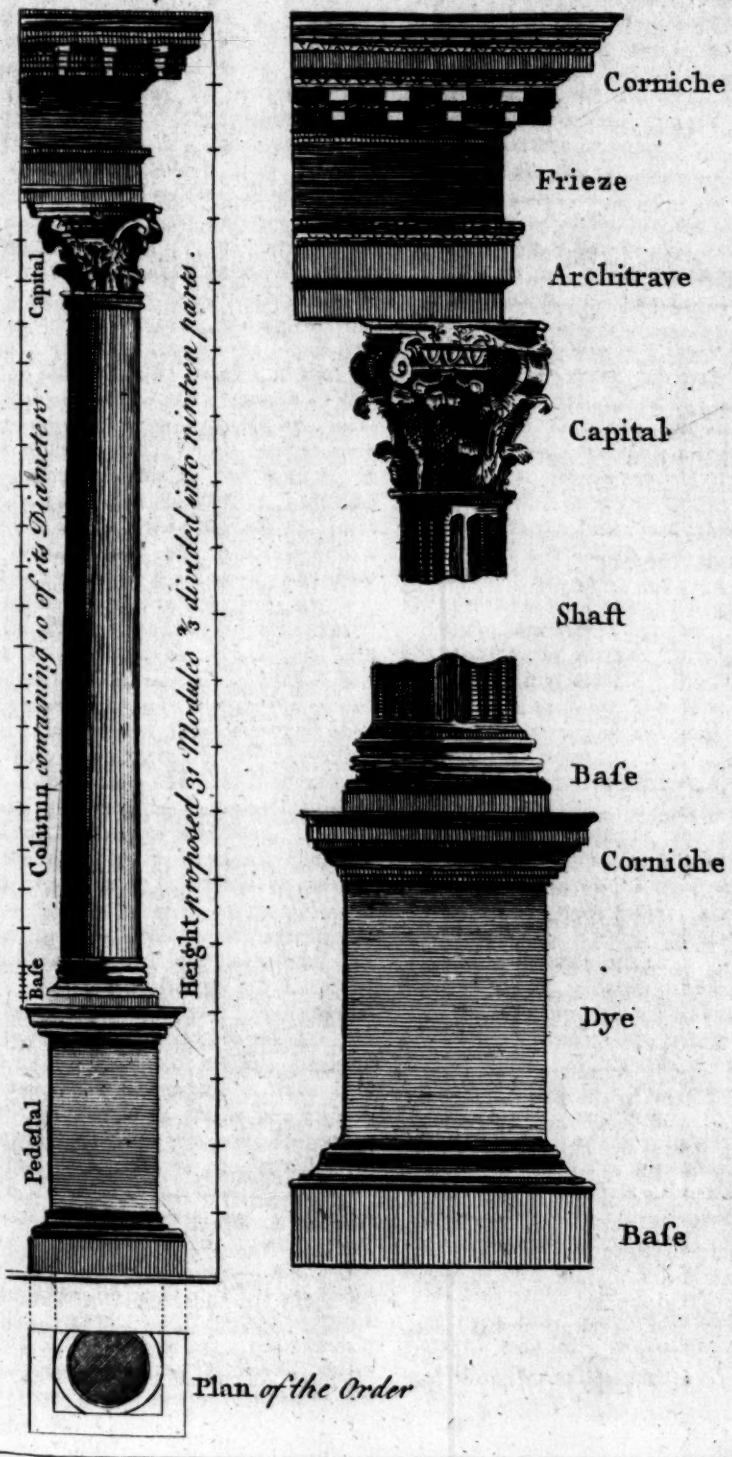
COLOURING, among painters, the manner of applying and conducting the colours of a picture; or the mixtures of light and ſhadows, formed by the various colours employed in painting.

The colouring is one of the chief branches in painting, which art is, by Mr. Felibien, divided into three parts, the deſign, the compoſition, and the colouring. See the article PAINTING.

Though the colouring ſtrikes moſt, yet, among maſters, it always gives place to the exactneſs of the deſign. According to M. de Piles, the word colouring, in a more limited ſenſe, is chiefly applicable to a hiſtory-piece, ſcarce at all to landſcapes: he adds, that the term relates more immediately to the carnations than to any thing elſe. The colouring, in its general ſenſe, comprehends whatever re-

late

COMPOSITE ORDER.



J. Jefferys sculp.

BRITISH MUSEUM

lates to the nature and union of colours; their agreement or antipathy; how to uſe them to advantage in light and ſhadow, ſo as to ſhew a relievo in the figures, and a ſinking of the ground; what relates to the aerial perſpective, that is, the diminution of colours by means of the interpoſition of the air; the various accidents and circumſtances of the luminary, and the medium; the different light both of the bodies illuminating and illuminated; the reflections, ſhadows, and different views with regard to the poſition of the eye, or the object; what produces ſtrength, boldneſs, ſweetneſs, &c. in paintings, well coloured; the various manners of colouring, both in figures, landſcapes, &c.

The *coloris*, or colouring, is different from colour; the latter renders the object ſenſible to the eye; the former is that by which the painter knows how to imitate the colour of all natural objects, by a judicious mixture of the ſimple colours upon his pallet: it teaches the manner in which colours are to be uſed for producing thoſe fine effects of the *chiaro obſcuro*, light and ſhade, which add boldneſs and a kind of relievo to the figures, and ſhew the remoter objects in their juſt light.

For the effects of colours, painters regard either the union or the œconomy: with reſpect to the firſt, care muſt be taken that they be laid ſo as to be ſweetly united under the briſkneſs of ſome principal one; that they participate of the prevailing light of the piece; and that they partake of each other by the communication of light and the help of reflection.

For the œconomy in managing their degrees, regard is to be had to the contraſt or oppoſition intervening in the union of the colours; and, by a ſweet interruption, the briſkneſs, which otherwiſe fades and palls, may be raiſed to the harmony which makes the variety of colours agree; ſupplying and ſuſtaining the weakneſs of ſome by the ſtrength of others; neglecting ſome places on purpoſe to ſerve as a a baſis or repoſe to the ſight; and to enhance thoſe which are to prevail throughout the piece. As to the degradation, where, the better to proportion the colours that fall behind, ſome of the ſame kind are to be preſerved in their purity, as a ſtandard for thoſe carried afar off, to be compared by, in order to juſtify the diminution; regard being always had to the quality of the air, which, when loaded with vapours, weakens the colours more than when clear: to the ſituation of the colours, where care muſt be taken that the pureſt and ſtrongeſt be placed before, or in the front of the piece; and that, by their force, the compound ones, which are to appear at a diſtance, be kept back, particularly the glazed colours, to be uſed in the firſt rank: laſtly, regard muſt be had to the expreſſion of the ſubject, and the nature of the matters or ſtuffs, whether ſhining or dull, opaque or tranſparent, poliſhed or rough.

COLOURING *and non-colouring drugs*. Into theſe dyers diſtinguiſh their drugs: the firſt are applicative, and communicate their colours to the matters boiled in them, or paſſed through them, as woad, ſcarlet-grain, cochineal, indigo, madder, turmeric, &c.

The ſecond ſerve to prepare and diſpoſe the ſtuffs and other matters, and to extract the colour out of the colouring ingredients; as alum, ſalt or cryſtal of tartar, arſenic, realgal, ſalt-petre, common ſalt, ſal ammoniac, ſal gemmæ, agaric, ſpirit of wine, bran, peas-flour, wheat, ſtarch, lime, and aſhes.

COLOURING *or* PAINTING *of glaſs*. See the article GLASS.

COLOURING *or* PAINTING *of porcelain*. See the article PORCELAIN.

COLOURING *of leather*. See LEATHER.

COLOURING *of marble*. See MARBLE.

COLT, in zoology, the ſame with foal, being the young of the horſe-kind. See the article FOAL.

COLT-EVIL, among farriers, a ſwelling of the yard and cods, incident both to ſtoned horſes and geldings; for which, after waſhing the parts with lukewarm vinegar, it is uſual to anoint them with juice of rue, mixed with honey, and boiled in hog's greaſe, adding bay-leaves and the powder of fenugreek.

COLT'S FOOT, in botany, the engliſh name of the tuſſilago. See TUSSILAGO.

COLTIE, a term uſed by timber-merchants for a defect, or blemiſh, in ſome of the annular circles of a tree, whereby its value is much diminiſhed.

COLUBER, in zoology, a very numerous genus of ſerpents, diſtinguiſhed by the following characters; the abdomen, or under part of the body, is covered with a great number of ſcuta, or hard cruſts; and the tail, on the contrary, with ſcales. Of this genus authors enumerate a great many ſpecies, diſtinguiſhed by the number of theſe ſcuta and ſcales, as the naja, lemniſcata, natrix, hippo, petola, ſiboh, &c.

Beſides theſe there are ſeveral very beautiful ſpecies of coluber without particular names, two of which are repreſented in plate LIII. fig. 1.

COLUBRINUM LIGNUM, SNAKE-WOOD, in the materia medica, a woody ſubſtance of a tolerably firm and denſe texture, brought to us from the iſland of Timor, and ſome other parts of the eaſt, from a foot to near twice as much in length, and from an inch to four or five inches in diameter: it is more properly a root than a wood, though ſo called; for what we receive is always the ſmaller or middling branches of the root; the tree is a ſpecies of that which produces the nux vomica. See the article *Nux* VOMICA.

The Indians are of opinion that this root is a remedy for the bite of a ſerpent called cobra de capello. However this be, it is allowed to be a remedy for intermittents, and a deſtroyer of worms: it operates differently, as taken in larger or ſmaller doſes; ſometimes by urine, ſometimes by ſweat, by ſtool, or by vomit; the laſt is the caſe when a large doſe is given: if yet larger, it brings on convulſions, and ſometimes proves fatal. It is never given internally, till it has been kept ſome years. We very ſeldom uſe it, being generally productive of convulſions or deliriums.

COLUMBA, PIGEON, in ornithology, a genus of paſſeres, the characters of which are theſe, the beak is ſtraight, and ſuraceous or ſcaly towards the baſe; the noſtrils are oblong, membranaceous, and half covered over; and the tongue is entire, or undivided.

To this genus belong all the kinds of domeſtic pigeons, and the oenas, palumbus, and turtur. See the articles OENAS, &c. See alſo plate XLV. fig. 1. which repreſents the long-tailed, variegated, weſt-indian dove, with a roundiſh black ſpot on each ſide of the head.

COLUMBA GROENLANDICA, the SEA-TURTLE-DOVE, in ornithology, a ſpecies of the colymbus or diver-kind, with three webbed toes on each foot. See the article COLYMBUS.

COLUMBINE, *aquilegia*, in botany. See the article AQUILEGIA.

COLUMBINE-COLOUR, or DOVE-COLOUR, among painters, denotes a kind of violet.

COLUMBUS, or *Congregation of St.* COLUMBUS, a ſociety of regular canons, who formerly had an hundred abbies or monaſteries in the britiſh iſlands.

COLUMN, in architecture, a round pillar, made to ſupport and adorn a building, and compoſed of a baſe, a ſhaft, and a capital. As every fulcrum is ſo much the more perfect, as it is firm, or carries the appearance of firmneſs; hence all columns ought to have their baſe broader than themſelves. See BASE.

And as a cylinder and a quadrangular priſm are more eaſily removed out of their place than a truncated cone, or a pyramid on the ſame baſe, and of the ſame altitude, the figure of columns ought not to be cylindrical, but grow leſs and leſs, like a truncated cone. Again, as columns are more firm if their diameter bears a greater proportion to their height than if it bore a leſs, the greater ratio is to be choſen where a large weight is to be ſuſtained; and leſs, where a ſmall weight is to be ſupported. Further, as the deſign of a column is to ſupport a weight, it muſt never be ſuppoſed without an entablature.

Columns are different in the different orders of architecture, and may be conſidered with regard to their matter, conſtruction, form, diſpoſition, and uſe.

With reſpect to the order, we have

Tuſcan COLUMN, that which has ſeven diameters in height, and is the ſhorteſt and moſt ſimple of all the columns. See the article TUSCAN ORDER.

Its diminution is one fourth, that is, the diameter at top is three fourths of the diameter juſt above the baſe.

Doric COLUMN has eight diameters in height, and its capital and baſe more inriched with mouldings than the tuſcan. It diminiſhes one fifth part of the diameter at the baſe. See the article DORIC.

Ionic COLUMN has nine diameters in height, and differs from the others by the volutes in its capital, and by its baſe. It diminiſhes one ſixth part of the diameter at the baſe. See the article IONIC.

Corinthian COLUMN, the richeſt and moſt delicate of all, has ten diameters in height, and its capital adorned with two rows of leaves with caulicoles, from whence ſpring ſmall volutes. It diminiſhes one ſeventh part of the diameter. See the article CORINTHIAN.

Compoſite COLUMN has likewiſe ten diameters in height, and two rows of leaves in its capital, with angular volutes like the ionic. It diminiſhes one eighth part of the diameter of the baſe. See the article COMPOSITE.

It may be obſerved, that different authors give different heights and proportions to columns

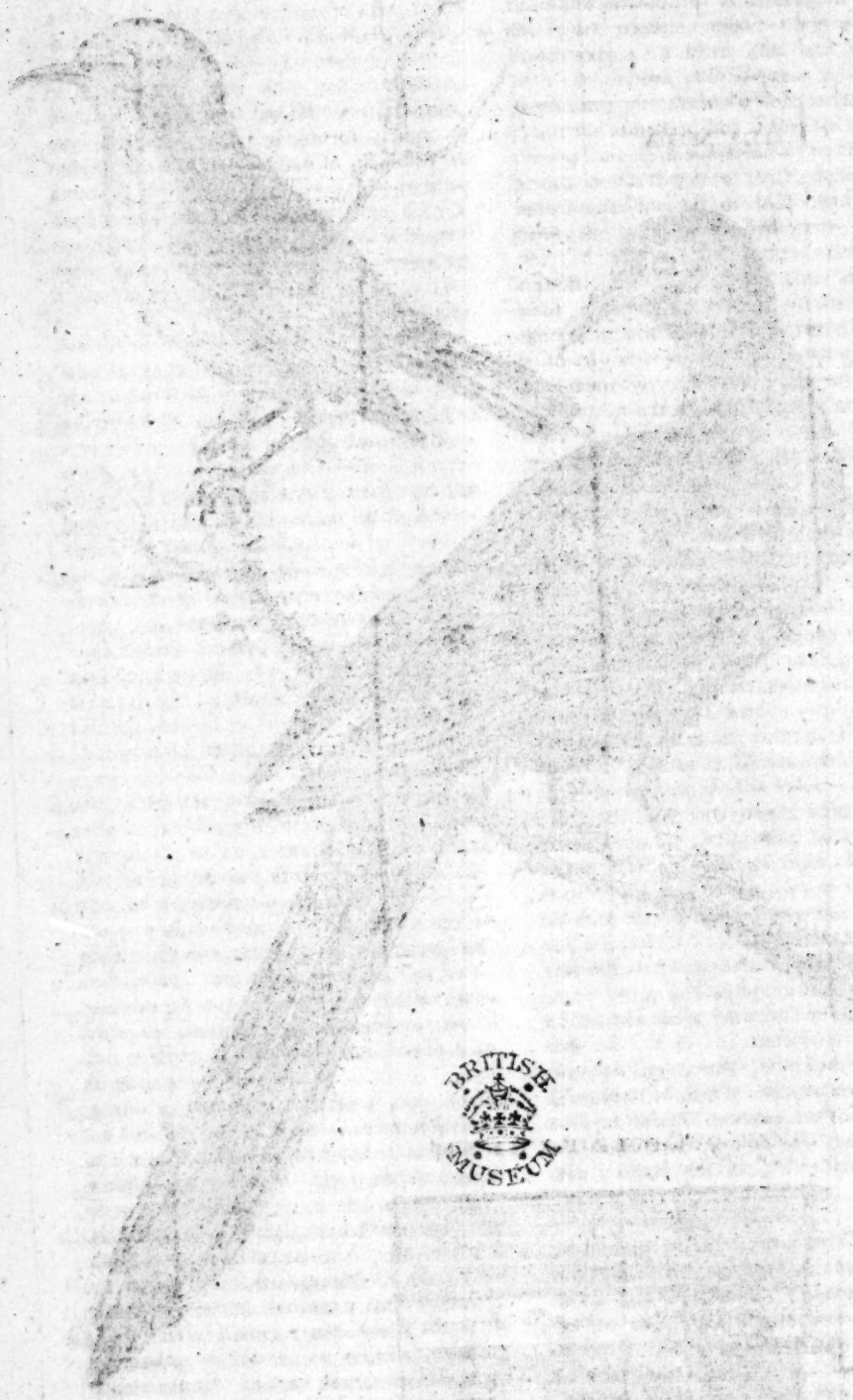
Fig. 2. CREEPER.

Fig. 1.
COLUMBA.



Fig. 3. COMETARIUM.

J. Jefferys sculp



BRITISH MUSEUM

columns of the ſame order, and that frequently the ſame author takes the liberty of diſpenſing with his own rules; but that the heights and proportions exhibited above are a mean between the extremes of all the reſt; in this we have followed Daviler and Mr. Perrault.

COLUMNS, *with regard to their matter are:*

Fuſible COLUMN, comprehends not only columns of various metals, and other fuſible matter, as glaſs, &c. but alſo thoſe of ſtone, ſaid to be caſt, the ſecret of which ſome believe to have been known to the antients.

Hydraulic COLUMN, that whoſe ſhaft appears to be of cryſtal; being formed by a number of little threads of water, falling from holes made in a girt of metal, at equal diſtances, by means of a pipe mounting through the middle of it. It alſo denotes a column from whoſe top proceeds a jet d'eau, to which the capital ſerves as a baſon, whence the water deſcends by a little pipe, which turns ſpirally round the ſhaft.

Moulded COLUMN, that made by impaſtation of gravel and flints of divers colours, bound together with a cement.

Water COLUMN, that whoſe ſhaft is formed of a large jet d'eau, which ſpouting out water violently from the baſe, drives it within the tambour of the capital, which is hollow, and in falling down it reſembles a column of liquid cryſtal.

COLUMNS, *with regard to their conſtruction.*

Cabled or *Rudented* COLUMN, that having projectures in form of cables, in the naked of the ſhaft, each cable having an effect oppoſite to that of a fluting, and accompanied with a little liſt on each ſide.

Coloſſal COLUMN, one of ſo large a ſize as not to enter any ordinance of architecture, but deſigned to be placed ſolitary in the middle of a ſquare, &c. Such is the trajan column.

Corollotic COLUMN, that adorned with foliages, turned ſpirally round the ſhaft, or in form of crowns and feſtoons: they are very proper for decorations of theatres.

Diminiſhed COLUMN, that which has no ſwelling, but begins to taper from the baſe, in imitation of trees.

Geminated COLUMN, that whoſe ſhaft is formed of three ſimilar and equal ſides or ribs of ſtone, fitted within one another, and faſtened at bottom with iron pins, and at top with cramp irons: it ought to be fluted, that the joints may be leſs diſcernible.

COLUMN *of joinery*, that made of ſtrong timber-boards, joined together: it is hollow, turned in the lathe, and uſually fluted: ſuch are the columns of moſt altar-pieces.

COLUMN *of maſonry* is made of rough ſtone, well laid and covered with plaiſter; or of bricks, laid triangular-wiſe, and covered with ſtucco.

COLUMN *of tambours*, or *bands*, that whoſe ſhaft is formed of ſeveral courſes of ſtone, or blocks of marble, leſs high than the diameter of the column.

COLUMN *in truncheons*, or *pieces*, conſiſts of two, three, or four pieces of ſtone or metal, differing from the tambours as being higher than the diameter of the column.

COLUMNS *with regard to their form are:*

Fluted COLUMNS, called alſo channelled and ſtriated columns, thoſe whoſe ſhafts are adorned with flutes or channellings, either from top to bottom, or only two thirds of their height.

Gothic COLUMN, a round pillar, either too ſhort for its bulk, or too ſlender for its height, having ſometimes twenty diameters, without either diminution or ſwelling, conſequently differing widely from the proportions of the antique.

Hermetic COLUMN, a kind of pilaſter, in manner of a terme, having the head of a man in lieu of a capital. It is ſo called becauſe the antients placed on the top of ſuch columns the head of Mercury.

Maſſive COLUMN, one too ſhort for the order, the capital of which it bears: it likewiſe comprehends tuſcan and ruſtic columns.

Oval COLUMN, that whoſe ſhaft has a flatneſs, its plan being made oval, to reduce the projecture.

Paſtoral COLUMN, that whoſe ſhaft is formed in imitation of a trunk of a tree, with bark and knots. It may be uſed in the gates of parks and gardens, and in the decoration of paſtoral ſcenes, &c.

Serpentine COLUMN, that formed of three ſerpents twiſted together, the heads of which ſerve as a capital: it is now called the taliſman or enchanted column.

Swelled COLUMN, that which has a bulging in proportion to the height of the ſhaft. This practice obtains among the modern architects, but ſeems to have been unknown to the antients.

Twiſted COLUMN, that whoſe ſhaft is twiſted round in form of a ſcrew, with ſix circumvolutions, being ordinarily of the corinthian order. Sometimes the twiſted column is in form of two or three ſlender ſhafts twiſted round, ſo as to leave a cavity in the middle.

COLUMNS, *with regard to their diſpoſition.*

Angular COLUMN is an inſulated one, placed in the corner of a portico, or inſerted in the corner of a building, or even a column that flanks any angle of a polygon.

Attic COLUMN, according to Pliny, is an inſulated pilaſter having four equal faces, and of the higheſt proportion.

Cantoned COLUMNS are thoſe engaged in the four corners of a ſquare pillar, to ſupport four ſprings of an arch.

Coupled COLUMNS, thoſe diſpoſed two and two, ſo as almoſt to touch each other at their baſes and capitals.

Doubled COLUMN, one column joined with another in ſuch a manner, that the two ſhafts penetrate each other with a third of their diameter.

Engaged COLUMN, that which enters in a wall with one third or one fourth of its diameter.

Grouped COLUMNS, thoſe placed on the ſame pedeſtal or ſocle, either by three and three, or four and four.

Inſulated COLUMN, one ſtanding free and detached from every other body.

Median COLUMNS, a name given by Vitruvius to the two columns in the middle of a porch, which have their intercolumination larger than the reſt. The term may alſo be applied to the middle row of columns in a frontiſpiece adorned with three orders.

Niched COLUMN, that whoſe ſhaft enters with half its diameter into a wall, hollowed out for its reception with its plane parallel to the projecture of the tore.

COLUMNS *with regard to their uſe*, are either, 1. Aſtronomical columns, ſuch as that at Paris erected for aſtronomical obſervations. 2. Chronological column. 3. Funeral column, which generally bears an urn, and has its ſhaft overſpread with ſymbols of grief and of immortality. 4. Gnomonic column, a cylinder, upon which the hour of the day is repreſented by the ſhadow of a ſtyle: of theſe there are two kinds; in the one the ſtyle is fixed, and the hour-lines are no more than the projection of a vertical dial upon a cylindrical ſurface: in the other, the ſtyle is moveable, and the hour-lines are drawn to the different heights of the ſun in the different ſeaſons of the year. 5. Hiſtorical column, that whoſe ſhaft is adorned with a baſſo relievo, running in a ſpiral line its whole height, and containing the hiſtory of ſome great perſonage. 6. Hollow column, that which has a ſpiral ſtair-caſe within-ſide, for the conveniency of aſcending to the top. 7. Indicative column, that which ſerves to ſhew the tides along the ſea-coaſts. 8. Inſtructive column, that which conveys ſome precept or inſtruction, ſuch as that raiſed by the ſon of Piſiſtratus at Athens, containing the rules of agriculture. 9. Itinerary column, one with ſeveral faces, placed in the croſſing of ſeveral roads, ſerving to ſhew the different routes by the inſcriptions engraved upon each of its faces. 10. Lactary column, at Rome, a column, according to Feſtus, in the herb-market, in the pedeſtal of which was a cavity, wherein young children, abandoned by their parents, out of poverty or inhumanity, were expoſed to be educated at the expence of the public. 11. Legal column, among the Lacedemonians, that erected in a public place, upon which were engraven the fundamental laws of the ſtate. 12. Limitrophous or boundary column, that which ſhews the limits of a kingdom, or country conquered. Thoſe called the columns or pillars of Hercules, are two very ſteep mountains in the ſtreights of Gibraltar. 13. Luminous column, one formed in a cylindrical frame, mounted and covered over with oiled paper or gauze, ſo that lights being diſpoſed in ranks within over each other, the whole appears to be on fire. 14. Manubiary column, a column adorned with trophies built in imitation of trees, whereon the ſpoils of enemies were antiently hung. 15. Memorial column, that raiſed on occaſion of any remarkable event, as the monument in London, built to perpetuate the memory of the burning of that city in 1666. 16. Menian column, any column that ſupports a balcony or meniana. 17. Miliary column, a column of marble raiſed by order of Auguſtus in the middle of the roman forum, from whence, as a center, the diſtances of the ſeveral cities of the empire were reckoned by other miliary columns, diſpoſed at equal diſtances on all the grand roads. 18. Roſtral column, that adorned with the peaks or prows of ſhips, *&c.* erected either in memory of a naval victory, or in honour of ſome admiral, *&c.* 19. Statuary column, that which ſupports a ſtatue. 20. Symbolical column, that repreſenting by ſymbols ſome particular country, or ſome memorable action. 21. Triumphal column, that erected by the antients in honour of an hero; the joints of the ſtones or courſes of which were cu-

vered with as many crowns, as he had made different military expeditions. 22. Zoophoric column, a kind of ſtatuary column, bearing the figure of ſome animal.

Scenography of a COLUMN. See the article SCENOGRAPHY.

COLUMN, among printers, is half a page, when the page is divided into two parts from top to bottom.

COLUMN in the military art, a long deep file of troops or baggage.

The firſt and ſecond lines of the army as they are encamped, make generally two columns on a march, filing off either from the right or left: ſometimes the army marches in four, ſix, or eight columns, according as the ground will allow; and each column is led by a general officer.

COLUMNA, in anatomy, a term applied to different parts: thus the *columna naſi*, is the loweſt and fleſhy part of the noſe which forms a part of the ſeptum; and the *columna oris*, is the ſame with the uvula. See the articles SEPTUM and UVULA.

The columnæ cordis are ſmall, long, and round fleſhy productions in the ventricles of the heart. See the article HEART.

COLUMNAR, ſomething reſembling or conſiſting of columns. See COLUMN.

COLUMNAR-MARBLE, the ſame with the baſaltes. See the article BASALTES.

COLUMNEA, in botany, a genus of plants of the didynamia-angioſpermia claſs, the flower of which is monopetalous and ringent: the fruit is a globoſe, bilocular berry, containing numerous oblong ſeeds.

COLUMNIA, or KOLOMNA, a city of Ruſſia, in the province of Moſcow, ſituated at the confluence of the rivers Moſcow and Occa, about forty miles ſouth-eaſt of the city of Moſcow: eaſt long. 40°, north lat. 56°.

COLURES, in aſtronomy and geography, two great circles ſuppoſed to interſect each other at right angles in the poles of the world, and to paſs through the ſolſtitial and equinoctial points of the ecliptic. That which paſſes through the two equinoctial points, is called the equinoctial colure, and determines the equinoxes; and the other which paſſes through the poles of the ecliptic, is called the ſolſtitial colure, becauſe it determines the ſolſtices. See EQUINOX and SOLSTICE.

COLURI, a little iſland in the gulph of Engia, in the Archipelago, about ſeven miles ſouth of Athens: of this iſland Ajax was ſovereign: eaſt longitude 24°, north latitude 38°.

COLUTEA, BASTARD SENA, in botany, a genus of the deadelphia-dicandria claſs of plants, the flower of which is papilionaceous, and its fruit a very large, broad, inflated, compreſſed legume, with the ſuperior ſuture erect, and the inferior one gibbous: it contains only one cell, wherein are ſeveral ſeeds of a kidney ſhape. See plate LXIII. fig. 2.

The leaves, but eſpecially the ſeeds of the colutea, purge with great violence, and therefore ought only to be adminiſtered to ſtrong conſtitutions, and then with good correctives.

COLYBA, or COLYVA, among the greek chriſtians, is a large diſh of boiled wheat garniſhed with blanched almonds, raiſins, and pomegranates, and ſtrewed round with odoriferous herbs, which is offered in honour of the ſaints at the interment of the dead. The colyva is carried by the ſexton or grave-digger, preceded by an attendant bearing two large wooden flambeaux gilt, and adorned with lace and ribbands. He is followed by two waiters loaded with bottles of wine and baſkets of fruit, and a third carrying a carpet, which is to be ſpread over the tomb of the deceaſed, and to ſerve as a table-cloth for the funeral entertainment. The prieſt hath a large ſhare of this collation; and the reſt, after the friends of the deceaſed have feaſted on it, is diſtributed among the poor.

COLYMBUS, DIVER, in ornithology, a genus of anſeres, with a ſubulated, compreſſed beak, longer than the head, and without teeth: add to this, that the feet are placed very far backward, ſo as to be fitter for ſwimming than ſtanding or walking.

To this genus belong the lumme, or mergus maximus; the creſted diver, colymbus criſtatus vel cornatus; the trapazorola; and the columba groenlandica. See the article LUMME, DIVER, *&c.*

The creſted colymbus, called alſo the great didapper, or creſted loon, is repreſented in plate XLIV. fig. 5.

COLYVA, or COLYBA. See COLYBA.

COMA, or COMA-VIGIL, a preternatural propenſity to ſleep, when nevertheleſs the patient does not ſleep, or if he does, awakes immediately without any relief. This diſorder is always ſymptomatic, and often attends acute, burning, and malignant fevers; as alſo an inflammation of the dura mater, and uſhers in a phrenzy.

phrenzy. Sometimes it attends an hemiplegia.

For the cure of the coma-vigil, if the fever has not continued above the third or fourth day, it is expedient to take away a large quantity of blood; then the body, if coſtive, muſt be opened with clyſters, which muſt not be very acrid; afterwards diluters and refrigerants ſhould be given to moderate the febrile heat, ſuch as abſorbent powders, gentle nitrous medicines, taken in a draught with diaphoretic antimony, &c.

COMA-SOMNOLENTUM, is when the patient continues in a profound ſleep, and when awaked, immediately relapſes, without being able to keep open his eyes. This is a primary diſeaſe, and muſt have a cauſe which obſtructs the paſſage of the nervous fluid from the cortical part of the brain to the medulla oblongata throughout the whole brain.

A coma-ſomnolentum, is divided into ſerous and ſanguine. The firſt requires the natural ſerous evacuations to be reſtored or promoted. Gouty fits are to be invited. Sternutatories are alſo of great uſe, as they diſcharge the ſerum thro' the noſe, and ſtimulate the nerves: and when a viſcid phlegm offends the ſtomach, vomits are uſeful, with powder of ſquills, or emetic tartar, with a laxative potion. In a ſanguine coma ſomnolentum, when the blood circulates ſlowly, or ſtagnates in the head, as in hypochondriac or ſcorbutic caſes, all hot ſpirituous remedies are as bad as poiſon: but bleeding, clyſters, gentle laxatives, cooling and nervous powders, are uſeful.

COMA BERENICES, BERENICE'S HAIR, in aſtronomy, a conſtellation of the northern hemiſphere compoſed of ſtars, near the lion's tail.

This conſtellation conſiſts of three ſtars, according to Ptolemy; of thirteen, according to Tycho; and of forty, in the britannic catalogue.

COMARUM, in botany, a genus of plants of the icoſandria-pentagynia claſs; the flower of which conſiſts of five oblong, acuminated petals, three times leſs than the cup in which they are inſerted: there is no pericarpium, but a ſcroiform, fleſhy receptacle which contains numerous acuminated ſeeds.

COMB, an inſtrument to clean, untangle, and dreſs flax, wool, hair, &c.

Combs for wool, are prohibited to be imported into Britain.

COMB is alſo the creſt or red fleſhy tuft growing upon a cock's head.

COMB, in a ſhip, a little piece of timber ſet under the lower part of the beak head, near the middle: it has two holes in it, and ſupplies to the fore-tacks what the cheſt-trees do to the main-tacks, that is, to bring the fore-tacks aboard.

Lady's COMB, or *Venus's* COMB, in botany, the ſame with the ſcandix. See the article SCANDIX.

Honey-COMB. See HONEY-COMB.

COMB-FISH, *pecten*, in the hiſtory of ſhell-fiſh. See the article PECTEN.

COMBAT, in a general ſenſe, denotes an engagement, or a difference decided by way of arms. See the article BATTLE.

COMBAT, in our antient law, was a formal trial of ſome doubtful cauſe or quarrel by the ſwords or baſtons of two champions. This form of proceeding was very frequent not only in criminal but in civil cauſes; being built on a preſumption, that God would never grant the victory but to him who had the beſt right. The laſt trial of this kind in England, was between Donald lord Rae, appellant, and David Ramſay, eſq; defendant, in the ſixth year of the reign of Charles I. when after many formalities, the matter was referred to the king's pleaſure. See TRIAL and CHAMPION.

COMBATANT, in heraldry, a term for two beaſts, as lions, &c. borne in a coat of arms in a fighting poſture, with their faces to each other.

COMBINATION, properly denotes an aſſemblage of ſeveral things two by two.

COMBINATION, in mathematics, is the variation or alteration of any number of quantities, letters, ſounds, or the like, in all the different manners poſſible.

F. Truchet, in the memoirs of the french academy, ſhews that two ſquare pieces, each divided diagonally into two colours, may be combined 64 different ways, ſo as to form ſo many different kinds of chequer-work; which appears ſurprizing enough, when one conſiders that two letters or figures can only be combined twice. See the article CHANGES.

F. Merſenne gives us the combinations of all the notes and ſounds of muſic as far as 64; the ſum whereof amounts to 90 figures or places.

Doctrine of COMBINATION. Prob 1. Any number of quantities being given, together with the number in each combination, to find the number of combinations.

One

One quantity admits of no combination: two, *a* and *b*, only of one combination: of three quantities, *abc*, there are three combinations, *viz. ab, ac, bc:* of four quantities, there are six combinations, *viz. ab, ac, ad, bc, bd, cd:* of five quantities, there are ten combinations, *viz. ab, ac, bc, ad, bd, cd, ae, be, ce, de.* Hence it appears, that the numbers of combinations proceed as 1. 3. 6. 10. that is, they are triangular numbers, whose sides differ by unity from the number of given quantities. If this then be supposed q, the side of the number of combinations will be $q-1$, and so the number of combinations $\frac{q-1}{1}, \frac{q+0}{2}$. See the article TRIANGULAR *Numbers*.

If three quantities are to be combined, and the number in each combination be three, there will be only one combination *abc*; if a fourth be added, four combinations will be found *abc, abd, bcd, acd*; if a fifth be added, the combinations will be ten, *viz. abc, abd, bcd, acd, abe, bde, bce, ace, ade*; if a sixth, the combinations will be twenty, *&c.* The numbers, therefore, of combinations proceed as 1. 4. 10. 20. *&c.* that is, they are the first pyramidal triangular numbers, whose side differs by two units from the number of given quantities. Hence if the number of given quantities be q, the side will be $q-2$, and so the number of combinations $\frac{q-2}{1}, \frac{q-1}{2}, \frac{q+0}{3}$.

If four quantities are to be combined, we shall find the numbers of combinations to proceed as pyramidal triangular numbers of the second order, 1. 5. 15. 35. *&c.* whose side differs from the number of quantities by the exponent minus an unit. Wherefore if the number of quantities be q, the side will be $q-3$, and the number of combinations $\frac{q-3}{1}, \frac{q-2}{2}, \frac{q-1}{3}, \frac{q+0}{4}$. See PYRAMIDAL *numbers*.

Hence is easily deduced a general rule of determining the number of combinations in any case whatsoever. Suppose, for example, the number of quantities to be combined q, and the exponent of combination n; the number of combinations will be $\frac{q+n-1}{1}, \frac{q-n+2}{2}, \frac{q-n+3}{3}, \frac{q-n+4}{4}$ *&c.* till the number to be added be equal to n. Take $q=6$ and $n=4$, the number of combinations will be $\frac{6-4+1}{1} \cdot \frac{6-4+2}{2} \cdot \frac{6-4+3}{3} \cdot \frac{6-4+4}{4} = \frac{6-3}{1} \cdot \frac{6-2}{2} \cdot \frac{6-1}{3} \cdot \frac{6+0}{4} = \frac{3}{1} \cdot \frac{4}{2} \cdot \frac{5}{3} \cdot \frac{6}{4} = 15$.

If it be required to know all the possible combinations of the given quantities, beginning with the combinations of the several two's, then proceeding to threes, *&c.* we must add $\frac{q-1}{1} \cdot \frac{q+0}{2}, \frac{q-2}{1} \cdot \frac{q-1}{2} \cdot \frac{q+0}{3}, \frac{q-3}{1} \cdot \frac{q-2}{2} \cdot \frac{q-1}{3} \cdot \frac{q+0}{4}$, *&c.* Whence the number of all the possible combinations will be $\frac{q}{1} \cdot \frac{q-1}{2} + \frac{q}{1} \cdot \frac{q-1}{2} \cdot \frac{q-2}{3} + \frac{q}{1} \cdot \frac{q-1}{2} \cdot \frac{q-2}{3} \cdot \frac{q-3}{4} + \frac{q}{1} \cdot \frac{q-1}{2} \cdot \frac{q-2}{3} \cdot \frac{q-3}{4} \cdot \frac{q-4}{5}$ which is the sum of the unciæ of the binomial raised to the power q, and abridged of the exponent of the power encreased by unity $q+1$. Wherefore since these unciæ come out $1+1$ by being raised to the power q; and since $1+1$ is equal to 2, $2^q - q - 1$ will be the number of all the possible combinations. For example, if the number of quantities be 5, the number of possible combinations will be $2^5 - 6 = 32 - 6 = 26$.

Prob. 2. Any number of quantities being given, to find the number of all the changes, which these quantities, combined in all the manners possible, can undergo. Let there be two quantities *a* and *b*, their variations will be two; consequently, as each of them may be combined with itself, to these there must be added two variations more. Therefore the number of the whole will be $2+2=4$. If there were three quantities, and the exponent of the variation 2, the combinations will be 3, and the changes 3; to wit, *ab, ac, bc,* and *ba, ca, cb*; to which if we add the three combinations of each quantity with itself *aa, bb, cc*, we shall have the number of changes $3+3+3=9$. In like manner, it is evident, if the given quantities were 4, and the exponent 2, that the number of combinations will be 6, and the number of changes likewise 6, and the number of combinations of each quantity

quantity with itſelf 4, and therefore the number of changes 16; if with the ſame exponent the given quantities were five, the number of changes would be 25; and in general, if the number of the quantities were n, the number of changes would be n^2.

Suppoſe the quantities 3, and the exponent of variation 3, the number of changes is found $27=3^3$, *viz.* *aaa*, *aab*, *aba*, *baa*, *aac*, *aca*, *caa*, *abb*, *bab*, *bba*, *abc*, *bac*, *bca*, *acb*, *cab*, *cba*, *acc*, *cac*, *cca*, *bbb*, *bbc*, *cbb*, *bcb*, *bcc*, *cbc*, *ccb*, *ccc*. In like manner it will appear, if the quantities were 4, and the exponent 3, that the number of changes would be $64=4^3$; and in general, if the number of quantities was $=n$, and the exponent 3, the number of changes would be n^3.

By proceeding in this manner, it will be found, if the number of quantities be n, and the exponent n, that the number of changes would be n^n. Wherefore, if all the antecedents be added, where the exponent is leſs, the number of all the poſſible changes will be found $n^n+n^{n-1}+n^{n-2}+n^{n-3}+n^{n-4}$, &c. till the number ſubtracted from n leaves 1, becauſe the beginning is from ſingle quantities taken once.

Since, then, the number of all poſſible changes is in a geometrical progreſſion, the firſt or ſmalleſt term of which is n^1, the largeſt n^n, and the denominator n; it will be equal $(n^{n+1}-n)\div(n-1.)$ Suppoſe $n=4$, the number of all poſſible variations will be $(4^5-4)\div(4-)=\frac{1020}{3}=320$.

Suppoſe again $n=24$, the number of all the poſſible variations will be $(24^{25}-24)\div(24-1)=$ 3200965864440681898677795534825060 0 divided by $23=$ 139172428888725299942512849340220 0. In ſo many various methods may the 24 letters of the alphabet be varied and combined among themſelves.

COMBINATORY, in general, denotes ſomething belonging to combination. See the preceding article.

COMBINATORY DISTILLATION, a method of rectifying ſpirits, much practiſed by diſtillers, by diſtilling ſeveral ingredients along with the ſpirits: ſuch are alkaline ſalts, and ſpirits, and other ſaline bodies capable of giving the ſpirits a good flavour. This method is condemned by Dr. Shaw; ſince theſe ingredients mix themſelves ſo intimately with the ſpirits, as not to be eaſily ſeparated again: hence, inſtead of rectifying or improving, they prevent the true and genuine taſte of the ſpirits.

COMBING *of wool*, in commerce, the drawing wool acroſs the teeth of a card called a comb, to diſpoſe it for ſpinning.

COMBUST, an appellation given to a planet, when in conjunction with, or not diſtant above eight degrees and thirty minutes from the ſun: ſome reſtrain the term combuſt, to the diſtance of half their diſk.

COME, an appellation by which the ſmall fibres of malt are called. See MALT.

COMEDY, is a ſort of dramatic poetry which gives a view of common and private life, recommends virtue, and expoſes the vices and follies of mankind in a humorous and merry way. Scaliger defines comedy a dramatic poem, repreſenting the buſineſs of life, whoſe event is fortunate and ſtile familiar. Voſſius defines it a dramatic poem, copying the actions of the principal citizens and common people in a familiar ſtile, and not without mirth and raillery.

Critics are much divided about the nature of comedy. Ariſtotle calls it an imitation of the worſt, or rather, of the loweſt claſs of perſons by way of ridicule. Mr. Corneille finds fault with this, and maintains, that the actions of kings themſelves may enter comedy, provided they be ſuch as are not very momentuous, nor attended with any conſiderable danger. Mr. Congreve ſeems pretty much of the ſame ſentiment. But Mr. Dacier is of a contrary opinion: he maintains, that comedy allows of nothing grave or ſerious, unleſs it be turned to ridicule; and that raillery and ridicule are its only proper and genuine marks. Thus different are critics on the nature of comedy: nor are they better agreed concerning the characteriſtic which diſtinguiſhes it from tragedy. Some diſtinguiſh it by the lowneſs of the ſubject; others, by the ridiculous light it is ſet in. According to F. Boſſu, comedy differs from tragedy in this, that the comic writer invents both the names of his perſons, and the action which he preſents; whereas the tragic writers invent only the latter; the former they are to take from hiſtory.

Comedy has parts of quality and parts of quantity. Of the firſt kind there are four eſſential, the fable, the manners, the ſenti-

ſentiments, and the diction; to which two are added which only relate to the repreſentation, *viz.* the muſic and decoration. See FABLE, MANNERS, *&c.*

The parts of quantity are alſo four. 1. The entrance. 2. The working up of the plot. 3. The full growth of the plot, or the counter turn. 4. The diſcovery or unravelling of the plot. Theſe, in the language of the antients, are called the protaſis, epitaſis, cataſtaſis and catastrophe. See the articles PROTASIS, EPITASIS, ACT, *&c.*

With regard to the various revolutions comedy has undergone, it is commonly diſtinguiſhed into three kinds, *viz.* the antient, the middle, and the new. The antient comedy was ſharp, ſatirical, and extremely abuſive; even men of the firſt rank, if they were ſuſpected of any criminal behaviour, whether the facts were true or falſe, were brought upon the ſtage without any diſguiſe, called by their own names, and uſed as ſeverely as poſſible. Thus in the comedy of the clouds, Ariſtophanes brings Socrates in by name. Indeed this liberty of abuſe was allowed chiefly to the chorus, and was moſt uſed during the democracy of the Athenians, eſpecially in the time of the peloponneſian war. But when the thirty tyrants had ſeized the government, the middle comedy commenced; for it being no longer ſafe for the poets to rail at people in authority, and openly to charge magiſtrates with crimes, they ſtill continued to ridicule the follies and expoſe the vices of particular perſons under fictitious names; by which the perſons were ſo well pointed out, that it was no difficult matter to know them. At length, however, they were obliged, in the reign of Alexander the Great, to repreſs even this licenſe: and this reformation gave occaſion to the new comedy, which only brought upon the ſtage feigned adventures, and imaginary names.

This laſt kind alone was received among the Romans, who nevertheleſs made a new ſubdiviſion of it into antient, middle and new, according to the various periods of the commonwealth. Among the antient comedies were reckoned thoſe of Livius Andronicus; among the middle, thoſe of Pacuvius; and among the new ones, thoſe of Terence. They likewiſe diſtinguiſhed comedy according to the quality of the perſons repreſented; and the dreſs they wore, into togatæ, prætextatæ, trabeatæ, and tabernariæ, which laſt agrees pretty nearly with our farces. Among us, comedy is diſtinguiſhed from farce, as the former repreſents nature as ſhe is, the other diſtorts and overcharges her. They both paint from the life, but with different views: the one to make nature known, the other to make her ridiculous.

COMERCY, a city of Lorrain, in France, twenty miles weſt of Nancy: eaſt long. 5° 26′, north lat. 48° 45′.

COMES, in zoology, a ſpecies of butterfly, with four legs, and erect, roundiſh wings.

COMET, an opake, ſpherical, and ſolid body like a planet, performing revolutions about the ſun in elliptical orbits, which have the ſun in one of the foci.

The antients were divided in their opinions concerning them; ſome conſidering them as wandering ſtars; others, as meteors kindled in the atmoſphere of the earth, ſubſiſting for a time, and then diſſipated; others looked upon them as prodigies. But it is put beyond doubt by the more accurate obſervations of the late aſtronomers, that they are a kind of planets. That they are not meteors, is obvious; for if they were, they could not bear that vaſt heat which ſome of them in their periſtelia receive from the ſun. The great comet which appeared in the year 1680, was within a ſixth part of the ſun's diameter from its ſurface, and therefore muſt acquire a degree of heat intenſe beyond all imagination.

But that comets are not only above the air, but alſo beyond the moon, is plain; becauſe comets ſeen from diſtant places, are obſerved to be at the ſame diſtance from a fixed ſtar which is near them. As for example, the comet which Tycho Brahe obſerved at Uraniburg, was likewiſe ſeen by Hagecius at Prague in Bohemia at the ſame time; which two places differ ſix degrees in latitude, and are nearly under the ſame meridian, and both meaſured the diſtance of this comet from the ſtar we call the vultur; that is, how much it was below it towards the horizon, for both the vultur and comet were in the ſame vertical circle, and both obſervators found their diſtances the ſame, and conſequently they both viewed the comet in the ſame point of the heavens; which could not be, unleſs it had been higher than the moon.

The figures of comets are obſerved to be very different, for ſome of them throw forth beams like hair every way round them, and theſe are called hairy comets.

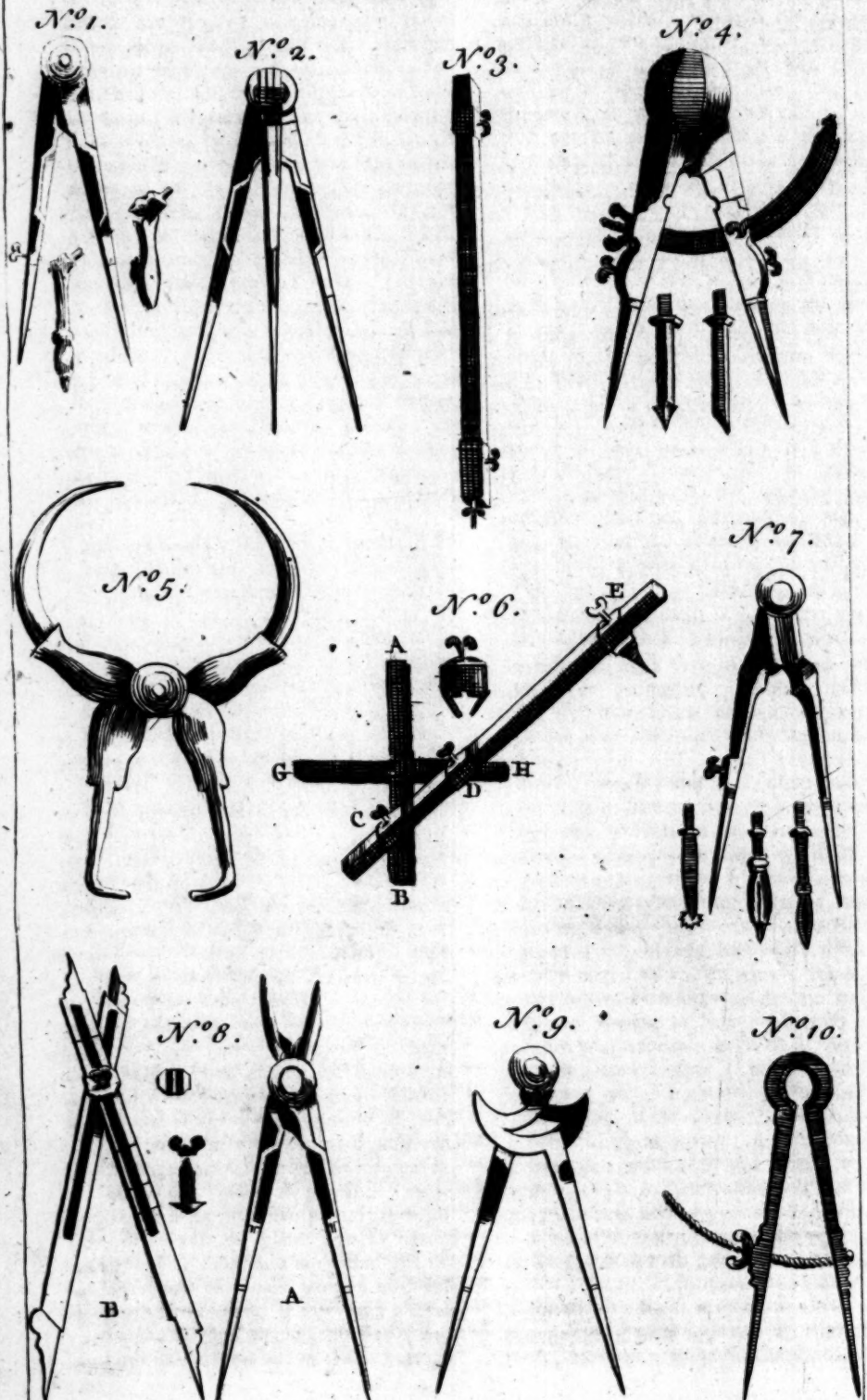
Others again have a long beard, or rather a fiery tail, oppoſite to the region in which the ſun is ſeen; and they are called bearded, or comets with tails. Their magnitude has alſo been obſerved to be very different; many of them without the hair, appear no bigger than ſtars of the firſt magnitude. But ſome authors have given us an account of others which were much greater: ſuch was that which appeared in the time of the emperor Nero, which, as Seneca relates, was not inferior in magnitude to the ſun itſelf. In like manner, the comet which Hevelius obſerved in the year 1652, did not ſeem to be leſs than the moon, though it had not ſo bright a ſplendor; for it had a pale and dim light, and appeared with a diſmal aſpect. Moſt have a denſe and dark atmoſphere ſurrounding their bodies, which weakens and blunts the ſun's rays; but within it, appears the nucleus or ſolid body of the comet, which when the clouds are diſperſed, gives a ſplendid and briſk light.

The particulars in which comets differ from planets are, that they move in various directions, ſome the way with the planets, others the contrary; neither are their motions confined within the zodiac, their orbits admitting of any inclination to the ecliptic whatever. And the eccentricity of their orbits is ſo very great, that ſome of the comets perform the greateſt part of their motion almoſt in right lines, tending in their approach to the ſun almoſt directly towards it, after which they paſs it; and when they leave it, march off again nearly in a right line till they are out of ſight, as if they were haſtening back to the fixt ſtars. As they approach the ſun, their motion grows proportionably ſwifter; for they deſcribe equal areas in equal times about its center as the planets do. Hence it is, that when they are in their perihelia, their motion is immenſely ſwifter than when they are in their aphelia. This will better appear from the following demonſtration. Let S (plate XLVI. fig. 2.) be the ſun, A P D G the elliptic orbit of a comet, T C E the orbit of the earth. If we ſhould ſuppoſe the ſemi-axis of the comet's orbit to be 100 times greater than the ſemi-axis of the earth's orbit, or, which is the ſame, than its mean diſtance from the ſun, that comet would not complete its revolution in leſs than 1000 years; for the ſquares of the periodical times of the earth and comet, muſt be as the cubes of their mean diſtances from the ſun: and the comet becomes viſible only for that part of its period, wherein it deſcends towards the ſun and approaches near the earth, as in F, and then after it has paſſed its perihelion, conſtantly riſing higher from the ſun about G, it will begin to vaniſh, and will not be viſible without a teleſcope. If the aphelion diſtance be to the perihelion as 1000 is to one, the velocity of a comet in the perihelion, will bear the ſame proportion to the velocity at the aphelion. For the area A S B, muſt be but equal to the area P S D, if the arches A B and P D be deſcribed by the comet in equal times, and then the arch P D muſt be greater than A B, in the ſame proportion as A S is greater than P S. This is the proportion of their abſolute velocities. But their angular velocities about the ſun, are in a duplicate proportion of theſe diſtances, or as 1000000 to 1. So that while the comet in its perihelion deſcribes one degree with its angular motion, where it aſcends to its aphelion, it will deſcribe in an equal time but $\frac{1}{1000000}$ of a degree. Hence then is ſeen the cauſe why comets are viſible to us for ſo ſhort a time, and when they diſappear, why they are ſo long before they viſit us again. This alſo deſtroys the objection again the return of comets drawn from the rarity of their appearance.

As the elliptic orbit of a comet is ſo very eccentric, that portion of it wherein it becomes viſible to us, may paſs for a parabola. By conſidering therefore, that portion as a piece of a parabola near its vertex, the calculation of their motions becomes much eaſier; and upon that hypotheſis Dr. Halley has conſtructed and calculated a table, by which, whenever a new comet ſhall appear, it may be determined whether it be any of thoſe which have yet appeared, and conſequently its period, and the axis of its orbit be determined, and its return foretold. From this table, it would appear that the comet which was ſeen in the year 1682, was the ſame obſerved before in 1607 and 1531, and was alſo expected in the year 1758, after a period of ſeventy-five and ſeventy-ſix years alternately; but though a comet was indeed obſerved in the year 1758, it does not by any means appear to have been that predicted by Dr. Halley, and expected by aſtronomers, which

BRITISH MUSEUM

COMPASSES.



J. Jeffreys sculp.

which furniſhes a great objection to the theory of comets, and the ſtated and periodical returns of theſe bodies.

By the ſame table, it would alſo appear, that the great comet which was ſeen in the year 1680, was the ſame ſeen in the time of king Henry I. in 1106, and in 531, and in the forty-fourth year before Chriſt, when Julius Cæſar was murdered. If ſo, then the period of this comet is about 575 years. There are between twenty and thirty that have appeared ſince the year 1337, but no two appearances ſeem to belong to the ſame comet, except thoſe above-mentioned.

The phænomena of comets which ariſe from the motion of the earth, agree in a great meaſure with thoſe of the planets. For inſtance, thoſe comets which move according to the order of the ſigns, a little before they diſappear, become more than ordinarily ſlow or retrograde, if the earth at that time be between them and the ſun, but more than ordinary ſwift, if the earth be on the oppoſite ſide: and the reverſe of this happens to thoſe which move contrary to the order of the ſigns. This is occaſioned by the motion of the earth; for when the earth goes the ſame way with a comet, but with a ſwifter motion, the comet ſeems retrograde; when with a ſlower motion, the comet's apparent motion becomes ſlower; and when the earth moves the contrary way, it becomes ſwifter. See the articles RETROGRADATION and PLANET.

Few comets are to be ſeen in their acceſs to the ſun, but in their receſs appear with long fiery tails, pointing directly, or nearly ſo, towards that part of the heavens which with reſpect to the comet is oppoſite to the ſun. Some are viſible before they reach the ſun, and begin to put forth their tails, which at firſt are ſhort and thin, ſeldom exceeding fifteen or twenty degrees in length, but grow longer and denſer as the comet comes nearer the ſun. If the comet paſſes very near the ſun, it then ſends forth fiery beams of light every way. After this it puts forth a tail forty, fifty, or ſixty degrees long, which, as the comet recedes farther from the ſun, continually diminiſhes both in length and ſplendor; but is larger and longer at any diſtance in its receſs from the ſun, than at an equal diſtance in its acceſs to it.

In order to account for the formation of the tails of comets, ſome have ſuppoſed that the heads of comets are tranſparent, and that their tails are no other than a beam of the ſun tranſmitted through them. But were the heads of comets tranſparent, they themſelves would be ſcarcely viſible. Others, that they ariſe from the refraction of the rays of light in their way from the comet to us. But if ſo, then both the planets and fixed ſtars ought to have tails alſo. Kepler aſcribed the aſcent of the tails to the rays of the ſun carrying the particles of the comet's amoſphere with them; that is, impelling them into the regions oppoſite to it. But we have no inſtance of any thing in nature like this: it is therefore an hypotheſis that cannot be ſupported. Sir Iſaac Newton thinks the great ſplendor and length of the tails, ariſes from the heat which the ſun communicates to the comet as it paſſes near it. As the aſcent of the ſmoke in a chimney is owing to the impulſe of the air with which it is intangled, in like manner, ſays he, the tail of a comet may riſe from the atmoſphere thereof into thoſe parts which are oppoſite to the ſun, being carried up by the æther about the comet, rarefied to a very great degree by the heat thereof. This opinion is greatly corroborated by the appearance of the tails; for when accurately obſerved, they are found not to riſe always in a direction preciſely oppoſite to the ſun, but to deviate or incline a little from thence towards thoſe parts which the comet has lately left; and not only ſo, but to be bent into a certain curvature, the extremities of the tails deviating from the true oppoſition more in proportion than the other parts; and to be more denſe, ſeemingly, and better defined on the convex than on the concave ſide. And further, that the longer the tail is, the more ſenſible is the curvature, as being the greateſt at the greateſt diſtance from the body of the comet. Upon theſe accounts Sir Iſaac thinks it evident, that the phænomena of the tails of comets depend on the motion of their heads, and that the heads furniſh the matter which forms the tails. Mr. Rowning, who is not ſatisfied with Sir Iſaac's opinion, accounts for the tails of comets in the following manner. It is well known, ſays he, that when the light of the ſun paſſes through the atmoſphere of any body, as the earth, that which paſſes on one ſide, is by the refraction thereof made to converge towards that which paſſes on the oppoſite one; and this convergency is not wholly effected either at the entrance of the light

into the atmoſphere, or at its going out; but that beginning at its entrance, it increaſes in every point of its progreſs. It is alſo agreed, that the atmoſpheres of the comets are very large and denſe. He therefore, ſuppoſes, that by ſuch time as the light of the ſun has paſſed through a conſiderable part of the atmoſphere of a comet, the rays thereof are ſo far refracted towards each other, that they now begin ſenſibly to illuminate it, or rather the vapours floating therein, and ſo render that part which they have yet to paſs through viſible to us; and that this portion of the atmoſphere of a comet thus illuminated, appears to us in the form of a beam of the ſun's light, and paſſes under the denomination of a comet's tail. This is the hypotheſis of Mr. Rowning: how well it anſwers the phænomena of the tails, may be ſeen in his ſyſtem of natural philoſophy, part IV. cap. 11.

A late writer ſuppoſes comets to be bodies deſtined to repair the quantities of light and fire inceſſantly emitted by the ſun, and which are ſcattered and diſperſed over the whole ſyſtem. The large ſweeping tails of the comets which extend ſo many thouſand miles, our author thinks well adapted to ſuch a purpoſe; and as many of thoſe particles of light and fire may be ſuppoſed to be driven to a vaſt diſtance, it is neceſſary they ſhould go to the utmoſt limits of the ſyſtem to make ſuch a collection. But as our author ſuppoſes the velocity of the rays of light to be the cauſe of the comets, as well as the planets motions, it is not poſſible a comet ſhould exonerate on the ſun's body, the particles of light and fire which he ſuppoſes it has collected in the wide expanſe, when the comet itſelf never comes in contact with the ſun; nor can thoſe very particles which were before emitted from the ſun's body, on the comet's arriving nearer to the ſun, quit the cellules of the comet, and continue their motion to the ſun, notwithſtanding the repulſion of the rays of light.

To determine the apparent place and courſe of a COMET. One method by which aſtronomers inveſtigate them in this. They obſerve what two ſtars are directly one on one ſide of the comet, and the other on the other; which is done by holding up a thread between the eye and the two ſtars, and extending it in ſuch manner, as that it ſhall ſeem to croſs each ſtar; then they look out two other ſtars in ſuch ſituation alſo, that the comet ſhall appear in a line that paſſes from one to the other, which are found as before. Then they extend a thread upon the celeſtial globe from one of the two firſt ſtars to the other; and another thread from one of the two laſt ſtars to the other: and the point on the globe where the threads croſs, is the apparent place of the comet at the time the obſervation was made. This they do daily, and ſo trace out its apparent courſe in the heavens.

To determine the parallax of a COMET. See the article PARALLAX.

Trajectory of a COMET. See the article TRAJECTORY.

COMETARIUM, a curious machine exhibiting an idea of the revolution of a comet about the ſun. It is contrived in ſuch a manner, as by elliptical wheels to ſhew the unequal motion of a comet in every part of its orbit. The comet is repreſented by a ſmall braſs ball, carried by a radius vector, or wire, in an elliptic groove about the ſun in one of its foci, and the years of its period are ſhewn by an index moving with an equable motion over a graduated ſilver circle. See a repreſentation of it in plate XLV. fig. 3. and Martin's Philoſophia Britannica, vol. I. p. 140, &c.

When the lid is taken off the box, it appears as follows; N O and Q T are the elliptic wheels, turning each other about their foci I and S, by means of a cat gut ſtring in a groove on their edges croſſing at K. N O is moved by the circular wheel I, which is itſelf moved by the wheel C; and this by an endleſs ſcrew turned by a winch on the outſide of the box. The ellipſis P L I M, deſcribed about the foci S *s*, repreſents the comet's orbit.

COMFREY, the engliſh name of a genus of plants, called by botaniſts ſymphytum. See the article SYMPHYTUM.

COMITATUS POSSE. See the article POSSE COMITATUS.

COMITIA, in roman antiquity, an aſſembly of the people, either in the comitium or campus-martius, for the election of magiſtrates, or conſulting on the important affairs of the republic. See COMITIUM and CAMPUS-MARTIUS.

There were certain days fixed for theſe aſſemblies, called *dies comitiales*, marked with a C in Julius Cæſar's calendar.

There were three kinds of comitia, *viz.* curiata, centuriata, and tributa, ſo diſtinguiſhed from the manner wherein the people voted, and gave their ſuffrages, *viz.*

viz. by curiæ, or pariſhes, tribes, or centuries. The comitia curiata owe their original to the diviſion which Romulus made of the people into thirty curiæ, which anſwer in moſt reſpects to our pariſhes. The comitia centuriata were inſtituted by Servius Tullius. Comitial aſſemblies held for the election of conſuls, were called conſular comitia. In like manner the other comitia were named from the officer to be created, whether a tribune, pontif, ædile, or the like. The power of calling theſe aſſemblies, belonged at firſt only to the kings: but on the eſtabliſhment of the democracy, the ſame privilege was allowed to moſt of the chief magiſtrates, and ſometimes to the pontiffs.

COMITIALIS MORBUS, an appellation given to the epilepſy, by reaſon the comitia of antient Rome were diſſolved, if any perſon in the aſſembly happened to be taken with this diſtemper.

COMITIUM, in roman antiquity, a large hall in the forum, where the comitia were ordinarily held. See the articles FORUM and COMITIA.

This hall was a long time open at top, for which reaſon the aſſemblies were often interrupted by bad weather. It was firſt covered in the time of the ſecond punic war, and according to Roſinus, the conſuls and tribunes were not created in the comitium, but in the campus-martius.

COMMA, among grammarians, a point or character marked thus (,), ſerving to denote a ſhort ſtop, and to divide the members of a period.

Different authors define and uſe this point ſo differently, that it is difficult to aſcertain the preciſe uſe of it. The ordinary doctrine concerning it, conveys no clear or diſtinct idea of it; being thus, that it ſerves to diſtinguiſh nouns, verbs, adverbs, and ſuch diviſions of a period as are not neceſſarily joined together: ſome ſay indeed, that the comma ſerves to diſtinguiſh thoſe members of a period in each whereof is a verb and the nominative caſe of a verb. Thus, *though nothing ſo much gains upon the affections as an extempore eloquence, which we have conſtantly occaſion for, and are obliged to practiſe every day, we very rarely meet with any who excel in it.*

The comma is made uſe of to diſtinguiſh ſeveral nouns, ſubſtantives, adjectives, or verbs, not joined by a conjunction in the ſame member of a period: thus, *words, looks, geſture, and different tones of voice, are the means by which mankind communicate their thoughts to each other*: or, *a man never becomes agreeable in converſation, but by ſtudying the taſte, reſpecting the character, conforming himſelf to the humour, &c. of thoſe he converſes with.*

But the comma is omitted when thoſe words are united by a conjunction, as, *good humour and good ſenſe ſeldom fail to make a man agreeable in converſation.*

COMMA, in muſic, an interval equal to the difference of the tone major and minor, and expreſſed by the ratio 81 : 80. See the articles INTERVAL and TONE.

COMMANDING GROUND, in the military art, an eminence overlooking any poſt, or ſtrong place.

A commanding ground is of three kinds: firſt, a front ground, being an height, oppoſite to the face of ſome poſt, which plays upon its front. Secondly, a reverſe ground, being an eminence that can play upon the back of any poſt. Thirdly, an enfilade commanding ground, or curtin commanding ground, being an eminence that, with its ſhot, can ſcour all the length of a ſtraight line.

COMMANDMENT, in a legal ſenſe, is uſed variouſly: ſometimes it is taken for the commandment of the king; as when, upon his own motion, and from his own mouth, he orders any perſon to priſon. Sometimes it is uſed for the commandment of the juſtices: this commandment is either abſolute, or ordinary. Abſolute, is when a juſtice commits a perſon to priſon for contempt, *&c.* upon his own authority, as a puniſhment. Ordinary, is where a juſtice commits a perſon rather for ſafe cuſtody than for puniſhment: the perſon, thus committed by ordinary commandment, is bailable. In another ſenſe of the word, magiſtrates may command others to aſſiſt them in the execution of their offices, in order to keep the king's peace, *&c.*

COMMANDMENT is likewiſe uſed for the offence of a perſon that wills or orders another to do ſome unlawful act, as theft, murder, or the like. To command any one to commit burglary, is felony excluded clergy; and he who commands the doing any act that is unlawful, is acceſſary to it and all the conſequences thereof, if executed in the ſame manner as commanded; though not, where it varies, or where the commander revokes the command. In treſpaſſes, *&c.* a maſter ſhall be charged with the acts of his ſervant,

ſervant, done by his command: however, ſervants ſhall not be excuſed for committing any crime, when they act by command of their maſters, who have no ſuch power over them as to enforce ſuch commandments. The commands of infants or feme-coverts are void.

COMMANDRY, a ſort of benefice, or certain revenue, belonging to a military order, and conferred on antient knights, who had done ſervices to the order, as the commandries of Malta.

The commandries of Malta are of different kinds: for as the order conſiſts of knights, chaplains, &c. there are peculiar commandries or revenues attached to each; and the knights to whom one of theſe benefices is given, is called commander.

There are alſo commandries for the religious in the order of St. Bernard, and St. Anthony. The kings of France have converted ſeveral of the hoſpitals for lepers into commandries of the order of St. Lazarus.

COMMELINA, in botany, a genus of the triandria monogynia claſs of plants, whoſe corolla conſiſts of ſix petals; the exterior three of which are ſmall, oval, and concave, of the dimenſions of the perianthium; the three interior and alternate petals are large, roundiſh, and coloured. The fruit is a naked, roundiſh capſule, containing three cells, and divided by three valves: the ſeeds, being two only, are angulated.

COMMEMORATION, in a general ſenſe, the remembrance of any perſon or thing; or the doing any thing in honour of a perſon's memory, or in remembrance of any paſt event. Thus the euchariſt is a commemoration of the ſufferings of Jeſus Chriſt.

It is a practice among the roman-catholics for dying perſons to leave a legacy to the church, for the rehearſing of maſſes in commemoration of them.

COMMEMORATION is alſo the name of two religious feaſts, otherwiſe called All-ſaints and All-ſouls. See ALL-SAINTS and ALL-SOULS.

COMMENDAM, in the eccleſiaſtical law, the truſt or adminiſtration of the revenues of a benefice, given either to a layman, to hold, by way of *depoſitum*, for ſix months, in order to repairs, &c. or to an eccleſiaſtic, or beneficed perſon, to perform the paſtoral duties thereof, till once the benefice is provided with a regular incumbent.

Commendams were formerly a very laudable inſtitution: for when an elective benefice became vacant, for which the ordinary could not, for ſome reaſon, immediately provide, the care of it was recommended to ſome man of merit, who took upon him the direction of it, till the vacancy was filled up, but enjoyed none of the profits.

At length it became a maxim among the canoniſts, that a clerk might hold two benefices, the one titular, and the other in commendam: yet ſtill, the commendam was to continue only till other proviſions were made; and afterwards, they began to be given for a determinate time.

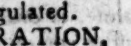
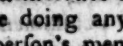
COMMENDAM, in the church of Rome, is likewiſe a real title of a regular benefice, ſuch as an abbey or priory, given by the pope to a ſecular clerk, or even to a layman, with a power to diſpoſe of the fruits thereof during life.

In England, the right of granting benefices in commendam is veſted in the crown by a ſtatute of Henry VIII. This right was conteſted in the reign of king James I. when it was diſputed, not only whether the king might grant a commendam, but whether or no they were to be granted without neceſſity.

COMMENDATORY, in a general ſenſe, ſomething belonging to a commendam.

COMMENDATORY ABBOT. See the article ABBOT.

COMMENDATUS, in our old cuſtoms, one that lives under the patronage of ſome great perſon: hence commendati homines, were thoſe who by voluntary homage put themſelves under the protection of a ſuperior lord; and commendati dimidii, thoſe who had dependance on two ſeveral lords, and were to pay each one half of their homage.

COMMENSURABLE, among geometricians, an appellation given to ſuch quantities as are meaſured by one and the ſame common meaſure: thus if the line A  *a* be equal to 8, and the line B  *b* equal to 4 inches, theſe two lines will be commenſurable, ſince the ſame common meaſure 2, meaſures them both.

COMMENSURABLE NUMBERS, whether integers or fractions, are ſuch as can be meaſured or divided by ſome other number, without any remainder: ſuch are 12 and 18, as being meaſured by 6 or 3.

COMMENSURABLE in POWER, is ſaid of

right lines, when their ſquares are meaſured by one and the ſame ſpace, or ſuperficies.

COMMENSURABLE SURDS, thoſe that being reduced to their leaſt terms, become true figurative quantities of their kind; and are therefore as a rational quantity to a rational one.

COMMENTARY, or COMMENT, in matters of literature, an illuſtration of the difficult or obſcure paſſages of an author.

It is an obſervation of Evremond, that commentators uſually find beauties, and even doctrines, that the original author never dreamt of.

COMMENTARY, or COMMENTARIES, likewiſe denotes a kind of hiſtory, or memoirs of certain tranſactions, wherein the author had a conſiderable hand: ſuch are the commentaries of Cæſar.

COMMERCE, a term uſed for the buying, ſelling, or bartering of all manner of commodities, in order to profit by the ſame.

Inſtead of ſhewing how commerce flouriſhed, and what encouragement it met with among the Egyptians, Phœnicians, Carthaginians, Greeks, Romans, &c. our labour will be better beſtowed in examining upon what footing it ſtood among our anceſtors, and how it is, or ought to be eſteemed at preſent. The large ſhare which the trading part of the nation has in the legiſlature, evidently proves how high it was valued by our anceſtors: for whilſt one, or at the utmoſt two members were thought ſufficient to repreſent a whole county in parliament, moſt boroughs ſend an equal number of burgeſſes to take care of their trading intereſt; ſo that theſe laſt amount to 334, whereas the knights for the counties are only 80, and the citizens for the cities 50. Great traders have likewiſe been diſtinguiſhed by particular marks of honour. They have been created knights, knights of the Garter and Bath, bannerets, baronets, barons and earls; which ſufficiently proves, that trading was not only formerly, but is, at preſent, thought to be of the greateſt conſequence to the nation; and never did, or can, by our laws and cuſtoms, detract from any man or family; but, on the contrary, that ſome of the beſt houſes among the nobility are the deſcendants of great traders: thus the late earl of Haverſham was originally a merchant, the preſent earl of Tilney's grandfather the ſame; as was the great-grandfather of the preſent duke of Bedford, and numberleſs others. And why ſhould not commerce, as well as law and divinity, or the ſword, be a road to the higheſt honour? It is prudence and activity that diſtinguiſhes a man from the common herd of mankind; and if he who ſaves a town, or a body of troops, be rewarded with honours, is not juſt, that the man who eſtabliſhes new manufactures, or branches of trade, whereby thouſands are not only maintained but made happy, ſhould be honoured by his prince, and reſpected by his fellow-ſubjects?

As to the great advantages of commerce, may it not be deemed the baſis of civil ſociety, and the moſt neceſſary principle to unite all men of whatever country or condition? Is it not an unexhauſtible ſource of plenty to all the world? By it, the mercantile people of all nations ſeem to be but one body incorporated; the riches of every trading town circulate into the hands of poor and induſtrious mechanics; and the neceſſities and conveniencies of one place ſupplied from the moſt diſtant ſhores of the Eaſt and Weſt Indies. Without commerce, the greateſt ſtates make but a poor figure; being neglected and deſpiſed by their neighbours, and unable to provide for their numerous poor at home: whereas where commerce flouriſhes, theſe add grandeur to the ſtate, and the merchants live like princes, and at the ſame time provide the ſinews of war againſt the moſt daring attacks of their enemies.

The cities of Venice and Genoa have been raiſed merely by commerce; and to its decay, may be aſcribed the diminution of their influence and power. So long as the counts of Flanders careſſed the woollen-manufacturers, nothing could compare to the wealth of the cities of Bruges and Ghent: whereas the workmen, when loaded with impoſitions and taxes, together with their manufactures, carried riches and wealth to England and Antwerp. Holland receives from, and ſends embaſſadors to, crowned heads. It ranks with the moſt diſtinguiſhed ſtates, and is behind none of them for the plenty it enjoys both of the neceſſary and the agreeable, for the boldneſs of its enterprizes, and the wiſdom of its government. And what are the Dutch but a ſet of merchants, who take a pride in being ſuch? Since the ſpirit of commerce has ſpread itſelf over that little corner of the world, it has aſſumed a new face; the

waters have been carried off; the grounds of their habitations are daily railed, and rendered firmer and firmer; their towns are become models of neatneſs and conveniency; and the draining of their lands has made way for gardening and huſbandry. As to England, the convenience and multitude of its ports, the goodneſs of its commodities, and the induſtry and ingenuity of its workmen, have eſtabliſhed its trade ſo as to admit of no rival but the Dutch. England trades in all parts of the world, nor does any nation drive ſuch a trade as ſhe does with her own commodities; for the dutch trade conſiſts chiefly in the tranſportation of foreign goods from one country to another. Not only at London, where the great trading companies are eſtabliſhed, but at Briſtol, Liverpool, &c. and all over the kingdom, does commerce exert its kindly influence: for not to mention the vaſt number of merchants, manufacturers, and other perſons immediately engaged in trade, does not the gardener, the farmer, the grazier, the landed gentleman, and even the nobleman in a manner live by it; nay, is it not the moſt ſolid ſupport of the prince, and of the ſtate itſelf?

Conſidering, therefore, the vaſt importance of this employment, it is no wonder that the nations of Europe ſeem to vie with each other, which ſhall give it the greateſt encouragement; and to the honour of our government it muſt be allowed, that, in this reſpect, Britain yields to none of them. Bounties, drawbacks, prohibitions, &c. and even the eſtabliſhment of trading companies, with excluſive privileges; all have this great and important object in view. See the articles, BOUNTY, DRAWBACK, &c.

As to the branches of commerce treated of in this dictionary, they are very numerous, but may be arranged under theſe heads: 1. Thoſe which are merely mercantile, or between merchant and merchant: ſuch are bills of exchange, accounts of ſales, company-partnerſhip, factor, ſupercargo, inſurance, book-keeping, &c. 2. Thoſe relative to ſhipping, as average, barratry, bottomry, bill of lading, charter-party, freight, &c. 3. Thoſe relating to exportation and importation, as bounty, drawback, duties, cuſtoms, board of trade and plantation, &c. 4. Such as regard manufactures, as cloth, linen, ſtuffs, hats, lace, &c. and hence woollen-draper, linen-draper, &c.

COMMINATORY, an appellation given to whatever threatens puniſhment, or ſome penalty: ſuch is that part of a felon's ſentence of baniſhment, which makes it death if he return before a certain time.

COMMINUTION, denotes the breaking, or rather grinding, a body to very ſmall particles.

COMMISSARY, in the eccleſiaſtical law, an officer of the biſhop, who exerciſes ſpiritual juriſdiction in places of a dioceſe ſo far from the epiſcopal ſee, that the chancellor cannot call the people to the biſhop's principal conſiſtory court, without giving them too much inconveniency.

In Scotland, theſe commiſſaries are ſtill continued, notwithſtanding epiſcopacy is now no more.

COMMISSARY, in a military ſenſe, is of three ſorts.

COMMISSARY *general of the muſters*, an officer appointed to muſter the army, as often as the general thinks proper, in order to know the ſtrength of each regiment and company, to receive and inſpect the muſter-rolls, and to keep an exact ſtate of the ſtrength of the army.

COMMISSARY *general of ſtores*, an officer in the artillery, who has the charge of all the ſtores, for which he is accountable to the office of ordnance.

COMMISSARY *general of proviſions*, an officer who has the inſpection of the bread, and proviſions of the army.

COMMISSION, in common law, the warrant or letters-patent which all perſons, exerciſing juriſdiction, have to empower them to hear or determine any cauſe or ſuit: as the commiſſion of the judges, &c. Moſt of the great officers judicial and miniſterial of the realm, are made alſo by commiſſion; by means of commiſſion, oaths, cognizance of fines, anſwers in chancery, &c. are taken; witneſſes examined, offices found, &c.

COMMISSION *of anticipation*, was a commiſſion formerly iſſued under the great ſeal, to collect a ſubſidy before the day.

COMMISSION *of aſſociation*, was a commiſſion under the great ſeal, to aſſociate two or more learned perſons with the juſtices in the circuits and counties of Wales.

COMMISSION *of bankruptcy*, is the commiſſion that iſſues from the lord chancellor,

cellor, on a perſon's becoming a bankrupt within any of the ſtatutes, directed to certain commiſſioners appointed to examine into it, and to ſecure the bankrupt's lands and effects, for the ſatisfaction of his creditors. See BANKRUPT.

COMMISSION *of charitable uſes* iſſues out of the chancery, directed to the biſhop and others of the dioceſe, where any lands given towards charitable uſes are miſapplied, *&c.* in order to inquire into and redreſs the abuſe.

COMMISSION *of delegates*, a commiſſion under the great ſeal, directed to certain perſons, uſually two or three temporal lords, as many biſhops, and two judges of the law, authoriſing them to ſit upon an appeal to the king, in the court of chancery, from a ſentence given by the archbiſhop in any eccleſiaſtical cauſe.

COMMISSION *of lunacy* iſſues out of the court of chancery, to inquire whether a perſon repreſented to be a lunatic be ſo or not.

COMMISSION *of peace.* See the article JUSTICES *of the peace.*

COMMISSION *of rebellion*, generally termed a *writ of rebellion*, iſſues where a perſon, after proclamation made by the ſheriff, on a proceſs out of the chancery or exchequer, required, upon pain of his allegiance, to preſent himſelf to the court by a day aſſigned, neglects to appear.

COMMISSION *of ſewers*, is a commiſſion directed to certain perſons, to inſpect and ſee drains and ditches well kept in the marſhy and fenny parts of England, for the better conveying of water into the ſea, and preſerving the graſs on the land. See the article SEWER.

COMMISSION OFFICERS. See the article OFFICER.

COMMISSION, in commerce. See the article FACTORAGE.

COMMISSIONER, a perſon authoriſed by commiſſion, letters-patent, or other lawful warrant, to examine any matters, or execute any public office, *&c.* See COMMISSION and WARRANT.

Beſides thoſe relating to judicial proceedings, there are

COMMISSIONERS *of the cuſtoms.* See the article CUSTOMS.

COMMISSIONERS *of exciſe.* See EXCISE.

COMMISSIONERS *of the navy.* See the article NAVY.

Lords COMMISSIONERS *of the treaſury.* See TREASURY and EXCHEQUER.

There are alſo commiſſioners of hawkers and pedlars, commiſſioners of alienation, commiſſioners of the ſtamps, *&c.*

COMMISSUM-FIDEI, or FIDEI COMMISSUM. See FIDEI COMMISSUM.

COMMISSURE, *commiſſura*, a word uſed by ſeveral authors for the ſmall pores of any body, or the little cleſts, cavities, or interſtices, which are between the particles of any body, eſpecially when the particles are broadiſh and flatiſh, and lie contiguous to one another like very thin plates. See the article PORE, *&c.*

COMMISSURE, in architecture, *&c.* the joint of two ſtones, or the application of the ſide of one to that of the other.

COMMITMENT, in law, the ſending of a perſon, charged with ſome crime, to priſon, by warrant, or order.

A commitment may be made by the king and council, by the judges of the law, the juſtices of peace, or other magiſtrate, who have authority by the laws and ſtatutes of the realm ſo to do. Every commitment ſhould be made by warrant under the hand and ſeal of the party committing, and the cauſe of commitment is to be expreſſed in the warrant. The terms of it muſt alſo require the criminal to be kept in cuſtody till diſcharged according to due courſe of law, *&c.*

COMMITTEE, one or more perſons, to whom the conſideration or ordering of a matter is referred, either by ſome court, or by the conſent of parties, to whom it belongs.

COMMITTEE *of the king*, is uſed, in our old cuſtoms, for the widow of the king's tenant, committed, by the antient laws of the realm, to the king's care and protection.

COMMITTEE *of parliament*, a certain number of members appointed by the houſe, for the examination of a bill, making report of an inquiry, proceſs of the houſe, *&c.*

When a parliament is called, and the ſpeaker and members have taken the oaths, there are committees appointed to ſit on certain days, *viz.* the committee of privileges and elections, of religion, of trade, *&c.* which are ſtanding committees.

Sometimes the whole houſe reſolves itſelf into a committee, on which occaſion each perſon has a right to ſpeak and reply as often as he pleaſes, which is not the caſe when a houſe is not in a committee.

COMMODATE, *commodatum*, among civilians, differ only from a loan, as things lent

lent may be returned in kind, though not in identity; which is otherwiſe in regard to the commodate.

COMMODITY, in a general ſenſe, denotes all ſorts of wares and merchandiſes whatſoever, that a perſon deals or trades in. See the article COMMERCE.

Staple COMMODITIES, ſuch wares and merchandiſes as are commonly and readily ſold in a market, or exported abroad; being, for the moſt part, the proper produce or manufacture of the country.

COMMODORE, in maritime affairs, an officer of the britiſh navy, commiſſioned by the lords of the admiralty, or by an admiral, to command a ſquadron of men of war in chief.

COMMON, ſomething that belongs to all alike, in contradiſtinction to proper, peculiar, *&c.* Thus the earth is ſaid to be our common mother.

COMMON *Bench*, a name by which the court of common pleas was antiently called. See the article COMMON PLEAS.

COMMON COUNCIL. See COUNCIL.

COMMON DUCT, in anatomy. See the article DUCT.

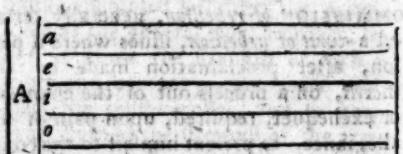
COMMON HUNT, the chief huntſman belonging to the lord mayor and aldermen of London.

COMMON LAW, that body of rules received as law in England, before any ſtatute was enacted in parliament to alter the ſame.

The common law is grounded upon the general cuſtoms of the realm, including the law of nature, the law of God, and the principles and maxims of law: it is alſo founded on reaſon, as ſaid to be the perfection of reaſon, acquired by long ſtudy, obſervation, and experience, and refined by the learned in all ages. It may likewiſe be ſaid to be the common birthright that the ſubject has for the ſafeguard and defence not only of his goods, lands, and revenues, but of his wife, children, life, fame, *&c.* Our common law, it is ſaid, after the heptarchy, was collected together into a body, by divers of our antient kings, who commanded, that it ſhould be obſerved through the kingdom; and it was therefore called common law, becauſe it was common to the whole nation, and before only affected certain parts thereof; being antiently called the folc-right, that is, the right of the people. See the article LAW.

COMMON PLACE BOOK, *adverſaria*, among the learned, denotes a regiſter of what things occur, worthy to be noted in the courſe of a man's ſtudy, ſo diſpoſed, as that among a number of ſubjects, any one may be eaſily found. Several perſons have their ſeveral methods of ordering them; but that which is beſt recommended, is Mr. Locke's method, which he has publiſhed in a letter to Mr. Toiſnard, determined thereto by the great conveniency and advantage he had found from it, in twenty years experience. The ſubſtance of this method is as follows.

The firſt page of the book, or, for more room, the two firſt pages fronting each other, are to ſerve for a kind of index to the whole, and contain references to every place or matter therein: in the commodious contrivance of this, ſo as it may admit of a ſufficient variety of materials, without confuſion, all the ſecret of the method conſiſts. The manner of it, as laid down by Mr. Locke, will be conceived from the following ſpecimen, wherein what is to be done in the book, for all the letters of the alphabet, is here ſhewn in the firſt four:



The index of the common place book being thus formed, it is ready for the taking down any thing therein.

In order to this, conſider to what head the thing you would enter is moſt naturally referred; and under which one would be led to look for ſuch a thing: in this head or word regard is had to the initial letter, and the firſt vowel that follows

lows it; which are the characteriſtic letters whereon all the uſe of the index depends.

Suppoſe, *e. g.* I would enter down a paſſage that refers to the head *beauty*; B, I conſider, is the initial letter, and *e* the firſt vowel: then, looking upon the index for the partition B, and therein the line *e* (which is the place for all words whoſe letter is B, and the firſt vowel *e*; as beauty, beneficence, bread, bleeding, blemiſhes, &c.) and, finding no numbers already wrote to direct me to any page of the book where words of that characteriſtic have been entered, I turn forward to the firſt blank page I find, which in a freſh book, as this is ſuppoſed to be, will be page 2, and here write what I have occaſion for on the head beauty; beginning the head in the margin, and indenting all the other ſubſervient lines, that the head may ſtand out and ſhew itſelf: this done, I enter the page where it is wrote, *viz.* 2 in the ſpace B *e*; from which time the claſs B *e* becomes wholly in poſſeſſion of the 2d and third pages, which are conſignedto letters of this characteriſtic.

Note, if the head be a monoſyllable beginning with a vowel, the vowel is at the ſame time both the initial letter and the characteriſtic vowel: thus, the word art is to be wrote in A *a*. Mr. Locke omits three letters of the alphabet in his index, *viz.* K, Y, and W, which are ſupplied by C, I, and U, equivalent to them: and as for Q, ſince it is always followed by an *u*, he puts it in the firſt place of Z; and ſo has no Z *u*, which is a characteriſtic that very rarely occurs. By thus making Q the laſt of the index, its regularity is preſerved, without diminiſhing its extent. Others chooſe to retain the claſs Z *u*, and aſſign a place for Q *u*, below the index.

If any imagine theſe hundred claſſes are not ſufficient to comprehend all kinds of ſubjects without confuſion, he may follow the ſame method, and yet augment the number to 500, by taking in one more characteriſtic to them.

But the inventor aſſures us, that in all his collections, for a long ſeries of years, he never found any deficiency in the index, as above laid down.

Dr. Felton, in his Introduction to the Claſſics, ridicules the practice of common-placing, with more wit, however, we think, than argument; for if a common place book be well contrived, if the paſſages taken down are diſperſed in a regular manner, the expedient muſt certainly be of great ſervice. Few readers are capable of remembring all the beautiful ſentiments and reflexions that are to be met with in an author; a common-place book, therefore, is a repoſitory, where fine obſervations upon all ſubjects are ſo ranged, that the reader may have recourſe to them on all occaſions.

COMMON PLEAS is one of the king's courts now held conſtantly in Weſtminſter-hall, but in former times was moveable.

All civil cauſes, as well real as perſonal, are, or were formerly, tried in this court, according to the ſtrict law of the land. In perſonal and mixed actions it has a concurrent juriſdiction with the king's bench, but has no cognizance of pleas of the crown. The actions belonging to the court of common pleas come thither by original, as arreſts and outlawries; or by privilege, or attachment for or againſt privileged perſons; or out of inferior courts, not of record, by pone, recordari, accedas ad curiam, writ of falſe judgment, &c. The chief judge of this court is called lord chief juſtice of the common pleas, who is aſſiſted by three other judges: the other officers of the court are the cuſtos brevium, who is the chief clerk; three prothonotaries, and their ſecondaries; the clerk of the warrants, clerk of the eſſoins, fourteen filazers, four exigentors, a clerk of the juries, the chirographer, the clerk of the king's ſilver, clerk of the treaſury, clerk of the ſeal, clerk of the outlawries, clerk of the inrolment of fines and recoveries, and clerk of the errors. See the article CUSTOS BREVIUM, &c.

COMMON, in law, that ſoil, the uſe of which is common to this or that town or lordſhip. There is common of paſture for cattle, and alſo common of fiſhing, common of eſtovers, common of turbary, &c.

COMMON *of paſture* is divided into, 1. Common in groſs, where a perſon by deed grants to another to have common alone, without any lands or tenements in the land of the granter. 2. Common appendant, a right belonging to a man's arable lands, of putting beaſts commonable, ſuch as horſes, oxen, ſheep, &c. into another's ground. 3. Common appurtenant, what belongs to an eſtate for all manner of beaſts, commonable, or not ſo: common appurtenant may be ſevered from the land whereto it is belonging,

but not common appendant; and the one may pertain to a houſe, paſture, *&c.* though not the other. 4. Common per cauſe de vicinage, becauſe of neighbourhood; a liberty that the tenants of one lord, in one town, have to common with tenants of another lord, in another town. Thoſe that claim this kind of common, may not put their cattle in the common of the other lord, for then they are diſtrainable; but turning them into their own fields, if they ſtray into the neighbour-common they muſt be ſuffered.

COMMON *of eſtovers* ſignifies a right of taking wood out of another perſon's woods, for houſe-bote, plough-bote, and hay-bote. If a tenant take more houſe-bote, *&c.* than is needful, he may be puniſhed for it as a waſte: and where a perſon has this common, if the owner of the land cuts down all the wood, ſo that there is none left for him, he may bring aſſiſe of eſtovers, or action in the caſe.

COMMON *of piſcary* ſignifies a liberty of fiſhing in another's water: though common of fiſhing to exclude the owner of the ſoil, is againſt law; yet a perſon by preſcription may have a ſeparate right of fiſhing in a water, and the owner be excluded, as one may grant ſuch right without granting the ſoil or the water.

COMMON *of turbary* ſignifies a licence to dig turf on the ground of another, or in the lord's waſte. It is appendant, or appurtenant to a houſe, but not to lands, and it gives no right to the land whence it is taken.

COMMON DAY, in plea of land, ſignifies an ordinary day in court, as in eight days of hillary, from the day of eaſter in fifteen days.

COMMON INTENDMENT, a common meaning of any thing, without ſtraining it to any foreign, remote, or particular ſenſe. Hence bar to common intendment, is a general bar, which commonly diſables the plaintiff's declaration. There are ſeveral caſes where it takes place in our law.

COMMON PRAYER is the liturgy in the church of England, Clergymen are to uſe the public form of prayers preſcribed by the Book of Common Prayer; and refuſing to do ſo, or uſing any other public prayers, are puniſhable by 1 Eliz. c. ii.

COMMON, in grammar, denotes the gender of nouns, which are equally applicable to both ſexes: thus *parens*, a parent, is of the common gender.

COMMON, in geometry, is applied to an angle, line, or the like, which belongs equally to two figures.

COMMON DIVISOR, a quantity or number which exactly divides two or more other quantities or numbers, without leaving any remainder.

COMMON *meaſure*, is ſuch a number as exactly meaſures two or more numbers, without a remainder.

Greateſt COMMON *meaſure*, of two or more numbers, is the greateſt number that can meaſure them; as 4 is the greateſt common meaſure of 8 and 12.

COMMON *ray*, in optics, is a right line drawn from the point of concurrence of the too optical axes through the middle of the right line, paſſing through the center of the pupil of the eye.

COMMON *object*. See the article OBJECT.

COMMON *ſenſory*. See the article SENSORY.

COMMONER, or GENTLEMAN COMMONER, in the univerſities, a ſtudent entered in a certain rank.

COMMONS, or HOUSE OF COMMONS, a denomination given to the lower houſe of parliament. See PARLIAMENT.

COMMONS, or COMMONALTY, likewiſe ſignifies the whole body of the people under the degree of a baron, whether knights, gentlemen, burgeſſes, yeomen, *&c.*

Doctors COMMONS. See COLLEGE *of civilians*.

COMMONS is alſo uſed for the ſtated public diet of ſome ſociety, as a college, the inns of court, *&c.* to which all the members are obliged to contribute, whether they attend or not.

COMMONWEALTH, the ſame with republic. See the article REPUBLIC.

COMMOTE, in political geography, the half of a cantred. See CANTRED.

COMMOTION, an inteſtine motion in the parts of any thing.

In medicine the term is applied to a blow or ſhake of the brain. Thus a fall occaſions a commotion, producing ſometimes a contrafiſſure, and at other times a rupture of the veſſels, and an apoſthume by ſhaking the whole maſs of the brain.

COMMUNAM APPROPRIARE, in law. See the article APPROPRIARE.

COMMUNIBUS LOCIS, a latin term frequently uſed by philoſophical writers, implying ſome medium or common relation between ſeveral places. Thus Dr. Keil ſuppoſes the ocean to be one quarter of a mile deep *communibus locis*, that is at a medium, or taking one place with another.

COMMUNIBUS ANNIS has the ſame meaning with regard to time, that *communibus locis* has with regard to places.

COMMUNICATING, in divinity, the act of receiving the ſacrament, or communion. See COMMUNION.

Proteſtants, as well as the greek church, communicate under both kinds; but the papiſts deny the cup to the laity.

COMMUNICATION, in a general ſenſe, the act of imparting ſomething to another.

COMMUNICATION is alſo uſed for the connection of one thing with another, or the paſſage from one place to another: thus a gallery is a communication between two apartments.

COMMUNICATION *of idioms*, in theology, the act of imparting the attributes of one of the natures in Jeſus Chriſt to the other.

It is by this communication that we ſay God ſuffered, and died, *&c.* which, ſtrictly ſpeaking, is only underſtood of the human nature; and is wholly founded on the union of the two natures in the perſon of Chriſt.

The lutherans carry the communication of idioms ſo far as to ſay, that Jeſus Chriſt is not only in his divine nature, and by reaſon of his divine perſon, but alſo, really and properly, in his humanity, immortal, immenſe, *&c.*

COMMUNICATION *of motion*, the act whereby a body at reſt is put into motion by a moving body; or, it is the acceleration of motion in a body already moving.

Sir Iſaac Newton demonſtrates, that action and re-action are equal and oppoſite; ſo that one body ſtriking againſt another, and thereby occaſioning a change in its motion, does in itſelf undergo the ſame change in its own motion the contrary way. Whence a moving body, ſtriking directly againſt another at reſt, loſes as much of its motion as it communicates to the other, and they will proceed with the ſame velocity as if grown into one maſs.

If, therefore, the body in motion be triple that at reſt, againſt which it ſtrikes, it will loſe a fourth part of its motion; and whereas, before the ſtroke, it would have run over, *v. g.* a line of 40 feet in a given time, it will only run over 30 after it; having loſt a fourth part of its velocity.

If a moving body ſtrike another already in motion, the firſt will augment the velocity of the latter; but will loſe leſs of its own motion, than if the latter had been abſolutely at reſt. Thus, if a body in motion be triple of another at reſt, and ſtrike againſt it with 24 degrees of motion, it will communicate 6 degrees of its motion to the other, and retain 18 itſelf: whereas if the other had already 4 degrees of motion, the firſt would only communicate 3, and retain 21; ſince thoſe 3 were ſufficient, in regard to the inequality of the bodies, to make them proceed with equal velocity.

After the ſame manner may be determined the other laws of communication of motion in bodies perfectly hard and void of all elaſticity: but all hard bodies, that we know of, have an elaſtic power, and the laws are different, and much more intire in elaſtic bodies. See the articles ELASTICITY and PERCUSSION.

If a body happen to decline out of the way, when moved by another, ſo as to leave a free paſſage to the body by which it was moved, yet that will only proceed with the velocity which it had after its communication to the other, and not with that it had before; it being a rule, that every thing endeavours to perſevere, not in the ſtate wherein it was formerly, but in that wherein it is at that juncture. Therefore a body that has already loſt part of its motion, by its meeting with another, may ſtill loſe more by a ſecond, and a third, ſo as, at length, to become perfectly quiet.

Hence, if two unequal homogeneous bodies move in a right line with the ſame velocity, the greateſt muſt perſevere in motion longer than the ſmaller; for the motions of bodies are as their maſſes: but each communicates of its motion to the circumjacent bodies which touch its ſurface: the larger body, therefore, tho' it has much more ſurface than the ſmaller, yet having leſs in proportion to its maſs or quantity of matter than the ſmaller, will loſe a leſs proportion of its motion, every moment, than the ſmaller.

Bridge of COMMUNICATION. See the article BRIDGE.

Lines of COMMUNICATION, in military matters, trenches made to continue and preſerve a ſafe correſpondence between two forts or poſts; or at a ſiege, between two approaches, that they may relieve one another.

COMMUNION, in matters of religion, the being united in doctrine and diſcipline;

pline; in which ſenſe of the word, different churches are ſaid to hold communion with each other.

In the primitive chriſtian church, every biſhop was obliged, after his ordination, to ſend circular letters to foreign churches, to ſignify that he was in communion with them. The three grand communions into which the chriſtian church is at preſent divided, is that of the church of Rome, the greek church, and the proteſtant church: but originally all chriſtians were in communion with each other, having one common faith and diſcipline.

COMMUNION is alſo uſed for the act of communicating in the ſacrament of the euchariſt, or the Lord's ſupper.

This ſacrament was inſtituted by Chriſt himſelf, and the adminiſtration of it committed by him to his apoſtles, and to their ordinary ſucceſſors. The ſacramental elements were to be conſecrated with ſolemn prayers and bleſſings, by the biſhop or preſident, and then delivered by the deacons to the people, as well thoſe who were abſent, as thoſe preſent. In the beginning of chriſtianity, the whole body of chriſtians uſed conſtantly to meet together at the Lord's table, on all their public aſſemblies; their ſacramental wine was uſually mixed and diluted with water; and during the time of adminiſtration, they ſung hymns and pſalms, particularly the 23d pſalm.

In the church of Rome, the prieſt only has the privilege of communicating in both kinds, whereas the laity communicate only under one: the taking of the cup from the laity, was enjoined by a decree of the council of Conſtance in the year 1414. The roman catholics pay the moſt ſuperſtitious regard to the conſecrated elements. In the greek church, the laity, as well as the clergy, receive the communion in both kinds: but their devotion, at the celebration of the euchariſt, is exceſſive.

COMMUNION-SERVICE, in the liturgy of the church of England, the office for the adminiſtration of the holy ſacrament, extracted from ſeveral antient liturgies, as thoſe of St. Baſil, St. Ambroſe, &c.

By the laſt rubric, part of this ſervice is appointed to be read every Sunday and holiday, after the morning prayer, even though there be no communicants.

COMMUNION-TABLE, that whereon the elements of bread and wine, uſed in communicating, or partaking of the holy ſacrament, are placed.

At the time of the reformation, a diſpute aroſe in England, whether the communion tables of the altar faſhion, which had been uſed in popiſh times, and on which maſſes had been celebrated, ſhould be ſtill continued; and it was ordered by the king and council, that they ſhould be pulled down. On this there aroſe another diſpute, *viz.* whether the new communion-tables ſhould be placed altarwiſe, or in the ſame place and ſituation with the former altars? And by an injunction of queen Elizabeth it was ordered, that holy tables ſhould be decently made, and placed in the place where the altars had ſtood; that is, at the upper end of the chancel, next the wall; where they ſtand to this day.

COMMUNIS, COMMON, is an appellation chiefly uſed by anatomiſts; in whoſe writings we meet with *communis capſula*, *communis ductus*, *communis muſculis*, &c.

COMMUNITY, a ſociety of men living in the ſame place, under the ſame laws, the ſame regulations, and the ſame cuſtoms.

Communities are of two kinds, eccleſiaſtic or laic. The firſt are either ſecular, as chapters of cathedral and collegiate churches; or regular, as convents, monaſteries, &c.

Lay-communities are of various ſorts, ſome contracted by a fixed abode of a year and a day in the ſame place; others formed by the diſcharge of the ſame office, the profeſſion of the ſame art, or the attending the ſame place of worſhip, as thoſe of pariſhes, fraternities, &c. Accordingly the word is commonly underſtood of pious foundations, for the ſupport of ſeveral perſons either in a ſecular or regular life, as convents, abbies, colleges, ſeminaries, hoſpitals, inns.

COMMUNITY, in the french law, denotes the joint property in goods between the huſband and wife; the effects of which is, that they are equally intitled to all moveable goods, and all immoveable eſtates acquired during the marriage, and equally liable to all debts contracted before or under marriage.

COMMUNITY *continued*, in the french law, is that which ſubſiſts between the ſurvivor of two perſons joined in marriage, and the minor children of that marriage, when the ſurvivor has not made an inventory of the effects in poſſeſſion during marriage.

COMMUNITY *tacit*, is that contracted between ſeveral perſons by the mere ming-

ling of their effects, provided they have lived together a year and a day. This community takes place only between children and a father or mother who ſurvives, when no inventory of goods has been taken.

COMMUTATION, in aſtronomy. The angle of commutation is the diſtance between the ſun's true place ſeen from the earth, and the place of a planet, reduced to the ecliptic. It is found by ſubtracting the ſun's true place from the heliocentric place of the planet. See HELIOCENTRIC.

COMMUTATION, in law, the change of a penalty or puniſhment from a greater to a leſs; as when death is commuted for baniſhment, *&c.*

COMORIN, or CAPE COMORIN, the moſt ſouthern promontory of the higher India, lying north-weſt of the iſland of Ceylon.

COMORRA, a city of Hungary, ſituated on the Danube, at the end of the iſland of Schut, thirty-three miles ſouth-eaſt of Preſburg: eaſt long. 18° 16′, north lat. 48° 15′.

COMPACT, in phyſiology, is ſaid of bodies which are of a cloſe, denſe, and heavy texture, with few pores, and they very ſmall.

COMPACT is alſo the name of a famous bull confirmed by pope Paul IV. by virtue of which, cardinals are reſtricted to confer benefices in their natural ſtate; that is, regular benefices on regulars, *&c.*

COMPANY, in general, denotes a number of people met together in the ſame place, and about the ſame deſign. With reſpect, however, to matters of pleaſure or diverſion, inſtead of company, we make uſe of the terms *party* or *match*.

COMPANY, in a commercial ſenſe, is a ſociety of merchants, mechanics, or other traders, joined together in one common intereſt.

When there are only two or three joined in this manner, it is called a partnerſhip; the term *company* being reſtrained to ſocieties conſiſting of a conſiderable number of members, aſſociated together by a charter obtained from the prince.

The mechanics of all corporations, or towns incorporated, are thus erected into companies, which have charters of privileges and large immunities. Thoſe of London are very numerous. The mercers were incorporated in the 17th of king Richard II. in the year 1393; the grocers, in the 20th Edward III. *ann.* 1345; the drapers, in the 19th of Henry VI. *ann.* 1439; the fiſhmongers, in the 28th of Henry VIII. *ann.* 1536; the goldſmiths, in the 26th of Richard II. *ann.* 1392; the ſkinners, in the 1ſt of Edward III. *ann.* 1327; the merchant-taylors, in 17th Henry VII. *ann.* 1501; the haberdaſhers, or hurrers, in 26th Henry VI. *ann.* 1447, and 17th Henry VII. *ann.* 1501; the ſalters, in 20th Henry VIII. *ann.* 1530; the ironmongers, in 3d Edward IV. *ann.* 1462; the vintners, in the reign of Edward III. and 15th Henry VI. and the clothiers, or cloth-workers, in 22d Henry VIII.

Beſides theſe, which are the twelve principal companies of London, there are other very conſiderable ones; as the dyers, brewers, leather-ſellers, pewterers, barbers, ſurgeons, armourers, white-bakers, wax-chandlers, tallow-chandlers, cutlers, girdlers, butchers, ſadlers, carpenters, cord-wainers, painters, curriers, maſons, plumbers, innholders, founders, imbroiderers, poulterers, cooks, coopers, bricklayers, and tylers; alſo bowyers, fletchers, black-ſmiths, joiners, plaiſterers, weavers, fruiterers, ſcriveners, bottle-makers, and horners; likewiſe ſtationers, marblers, wool packers, farriers, paviors, lorimers or loriners, brown-bakers, woodmongers, upholſterers, turners, glaziers, clerks, watermen, apothecaries, and throwſters.

All theſe are fraternities, and moſt of them incorporated by charter, for carrying on and improving the ſeveral manufactures ſignified by their names. It now remains, that we give ſome account of the principal companies of merchants, ſome of which trade with joint ſtocks, and all of them enjoy by charter many excluſive privileges; for however injurious theſe companies may, at this time of day, be reckoned to the nation in general, yet it is certain, that they were the original parents of all our foreign commerce; private traders upon their own bottom being diſcouraged from hazarding their fortunes in foreign countries, till the methods of traffic had been ſettled by joint-ſtock companies: and from this very principle it is, that we find ſeveral nations at preſent endeavouring to extend their trade by the ſame means.

The moſt antient trading company, in Britain, is the Hamburgh company, originally called merchants of the ſtaple, and afterwards merchant adventurers: they were incorporated by king Edward IV. from which time they traded with ſucceſs till the reign of queen Elizabeth, who,

who, for a farther encouragement of their industry, not only confirmed, but inlarged their privileges. However, it ought to be obſerved, that this trade is now open to private merchants, upon paying a very ſmall ſum to the company.

The company of this kind, next incorporated, was that of the Ruſſia-merchants; who having improved their trade and commerce in thoſe remote parts, were incorporated by Edward VI. greatly encouraged by queen Mary, and had their confirmation, with an inlargement of their privileges, from queen Elizabeth. This company is not very conſiderable at preſent; the trade of thoſe parts being moſtly carried on by private merchants, on paying the ſum of 5l. to the company.

The Eaſtland-company, formerly called merchants of Elbin, were incorporated by queen Elizabeth, and by her greatly encouraged; but, like the former company, it is now become inconſiderable, the trade to Norway and Sweden being laid open by act of parliament.

The Turkey, or Levant-company, was likewiſe incorporated by the ſame princeſs, and its charter confirmed and enlarged by king James I. who impowered them to trade to the Levant, or eaſtern parts of the Mediterranean; particularly to Smyrna, Aleppo, Alexandria, Grand-Cairo, and the other parts of the turkiſh dominions. But this trade is now alſo laid open to private merchants, upon paying a ſmall conſideration.

The next in order is the Eaſt-India-company, firſt incorporated in the year 1600, and impowered to trade to all countries lying eaſtward of the cape of Good Hope. Towards the end of king William's reign, an act of parliament paſſed, granting all private merchants, who ſhould raiſe a certain ſum for the ſupply of the government, the privilege of trading to theſe parts: accordingly, a great many ſubſcribed, and were called the new Eaſt-India company; which ſoon found it neceſſary to unite with the old one, and trade with one joint ſtock: ſince which time, they have been ſtiled the united Eaſt-India-company; and are, at preſent, in a flouriſhing condition, and in poſſeſſion of many conſiderable forts and factories on the coaſt of Malabar, the Coromandel-coaſt, the bay of Bengal, &c.

The royal African-company was firſt erected in the year 1661, with an excluſive privilege to trade from cape Blanc, on the coaſt of Africa, in 20° north latitude, as far as the cape of Good Hope. But this trade is now laid open by act of parliament. See the article AFRICAN.

The Eaſtland-company, the Greenland-company, the Hudſon's bay-company, the ſouth-ſea-company, have likewiſe their ſeveral charters and privileges for trading to the places from which they take their denominations.

Theſe are the principal trading companies belonging to the crown of Great-Britain; and of a ſimilar nature are the Dutch Eaſt and Weſt-India-companies, the French Eaſt and Weſt-India companies, &c.

Concerning theſe companies, it may be proper to remark, that however neceſſary they might be in the infancy of trade, they are now looked upon by moſt men in the light of monopolies: hence it is, that their privileges have from time to time been leſſened, in order to eſtabliſh an abſolutely free and general trade; and experience hath ſhewn, that the trade of the nation has advanced in proportion as monopolies have been laid aſide. Indeed, to carry on trade with diſtant countries, where forces and forts are to be maintained, a company with a joint ſtock ſeems neceſſary; or, at leaſt, certain duties ought to be paid, by all who trade thither, towards defraying the ſaid expences: for not to ſpeak of the Eaſt India, Hudſon's-bay, &c. companies, the expence of maintaining whoſe forts muſt be very conſiderable, even the Turkey, Hamburgh, Muſcovy, and Eaſtland companies, which do not trade with a joint ſtock, are nevertheleſs obliged to be at conſiderable charges, in making preſents to the grand ſeignior and his miniſters, maintaining conſuls, &c. It would therefore be injuſtice that any ſhould trade to the places within their charters, without paying the ſame duties towards the companies charge, as the preſent adventurers pay; but then there appears to be no reaſon why any of the king's ſubjects ſhould be barred from trading to thoſe places, or forced to pay a great fine for admiſſion, that are willing to pay the company's duties, and ſubmit to their regulations and orders in other reſpects.

On the whole, as all reſtrictions of trade are found to be hurtful, nothing can be more evident than that no company whatſoever, whether they trade in a joint ſtock, or

or only under regulation, can be for the public good, except it may be eaſy for all or any of his majeſty's ſubjects to be admitted into all or any of the ſaid companies, at any time, and for a very inconſiderable fine.

COMPANY, in military affairs, a ſmall body of foot, commanded by a captain, who has under him a lieutenant and enſign.

The number of centinels, or private ſoldiers in a company, may be from 50 to 80; and a battalion conſiſts of thirteen ſuch companies, one of which is always grenadiers, and poſted on the right: next them ſtand the eldeſt company, and on the left the ſecond company; the youngeſt one being always poſted in the center.

Companies not incorporated into regiments are called irregulars, or independent companies.

Artillery COMPANY. See the article ARTILLERY.

COMPANY *of ſhips*, a fleet of merchantmen, who make a charter-party among themſelves, the principal conditions whereof uſually are, that certain veſſels ſhall be acknowledged admiral, vice-admiral, and rear admiral; that ſuch and ſuch ſignals ſhall be obſerved; that thoſe which bear no guns, ſhall pay ſo much *per cent.* of their cargo; and in caſe they be attacked, that what damages are ſuſtained, ſhall be reimburſed by the company in general. In the Mediterranean, ſuch companies are called conſerves.

Rule of COMPANY, in arithmetic, the ſame with fellowſhip. See FELLOWSHIP.

COMPARATES, *comparata*, among logicians, denote the terms of a compariſon, or the ſubjects compared to each other. See the article COMPARISON.

COMPARATIONE, or *punctum ex* COMPARATIONE, in conics. See the article PUNCTUM.

COMPARATIONIS HOMOGENEUM, in algebra. See the article HOMOGENEUM.

COMPARATIVE, in general, denotes ſomething that is compared to another. Thus,

COMPARATIVE ANATOMY, is that branch of anatomy which conſiders the ſecondary objects, or the bodies of other animals; ſerving for the more accurate diſtinctions of ſeveral parts, and ſupplying the defect of human ſubjects.

It is otherwiſe called the anatomy of beaſts, and ſometimes zootomy; and ſtands in contradiſtinction to human anatomy, or that branch of the art which conſiders the human body, the primary object of anatomy. See ANATOMY.

COMPARATIVE DEGREE, among grammarians, that between the poſitive and ſuperlative degrees, expreſſing any particular quality above or beneath the level of another.

The French form moſt of their comparatives by the addition of the particles *plus*, *moins*, and *auſſi*: the Italians, by *piu*, *meno*, &c. as the quality of any thing is to be raiſed, lowered, or equalled to another.

The engliſh, of moſt other modern languages, comes in this particular next the latin, which expreſſes the comparative degree by a peculiar termination of its adjectives: thus, as the Latins ſay, *lucidus*, *lucidior*, *lucidiſſimus*; ſo we ſay in engliſh, *bright*, *brighter*, *brighteſt*. The ſame holds in moſt other inſtances, as *formoſus*, *formoſior*, *formoſiſſimus*; in engliſh, *fair*, *fairer*, *faireſt*. Again, as the Latins have anomalous, or irregular degrees of compariſon, ſo have the Engliſh, and frequently in the ſame inſtances: thus, *bonus*, *melior*, *optimus* is expreſſed in engliſh, by *good*, *better*, *beſt*; and ſo in other examples. However, the regular comparative degree in engliſh, is formed by adding the ſyllable *er*, or prefixing the word *more*, to the poſitive degree: thus, from *long*, *narrow*, &c. are formed *longer*, *narrower*; and from *wiſe*, *prudent*, &c. come *more wiſe*, *more prudent*, &c.

COMPARISON, in a general ſenſe, the conſideration of the relation between two perſons or things, when oppoſed and ſet againſt each other, by which we judge of their agreement or difference, and find out wherein the one has the advantage of the other.

COMPARISON *of ideas*, among logicians, that operation of the mind whereby it compares its ideas one with another, in regard of extent, degree, time, place, or any other circumſtance, and is the ground of relations. This is a faculty which the brutes ſeem not to have in any great degree. See IDEA and RELATION.

COMPARISON, in grammar, the inflection of the comparative degree. See the article COMPARATIVE.

COMPARISON, in rhetoric, a figure that illuſtrates and ſets off one thing, by reſembling and comparing it with another, to which it bears a manifeſt relation and reſem-

reſemblance, as the following figure in Shakeſpear.

" She never told her love,
" But let Concealment, like a worm
" i' the bud,
" Feed on her damaſk cheek: ſhe
" pined in thought,
" And ſat like Patience on a monu-
" ment,
" Smiling at Grief."

COMPARTIMENT, or COMPARTMENT. See the article COMPARTMENT.

COMPARTITION, in architecture, denotes the uſeful and graceful diſpoſition of the whole ground-plot of an edifice, into rooms of office, and of reception or entertainment. See the article BUILDING.

COMPARTMENT, or COMPARTIMENT, in general, is a deſign compoſed of ſeveral different figures, diſpoſed with ſymmetry, to adorn a parterre, a ceiling, *&c.*

A compartment of tiles, or bricks, is an arrangement of them, of different colours, and varniſhed, for the decoration of a building. Compartments, in gardening, are an aſſemblage of beds, plats, borders, walks, *&c.* diſpoſed in the moſt advantageous manner that the ground will admit of. Compartments, in heraldry, are otherwiſe called partitions.

COMPASS, or *Mariner's* COMPASS, an inſtrument whereby the ſhip's courſe is determined.

This inſtrument, which is a repreſentation of the horizon, is a circle divided into 32 equal parts, by right lines drawn from the center to the circumference, called points, or rumbs, being alſo divided into 360 equal parts, or degrees; and conſequently, the diſtance between, or angle formed by any two rumbs, is equal to 11° 15′. The four principal of theſe rumbs are called the cardinal points, and take their names from the places to which they tend, *viz.* that which extends itſelf under the meridian, pointing towards the north, is called north; and its oppoſite one, pointing towards the ſouth, is called ſouth; that which is towards the right hand, the face being directed north, is termed eaſt; and its oppoſite, weſt. The names of the others are compounded of thoſe, according to their ſituation, as may be ſeen in plate XLVI. fig. 3. N°. 1. On the backſide of the north and ſouth points is faſtened a needle, which, being touched with a magnet or loadſtone, is endued with a magnetic virtue, whereby the north and ſouth points are nearly directed towards the north and ſouth points of the horizon; and is, therefore, of the greateſt uſe in determining the ſhip's courſe, and alteration of the winds. See VARIATION.

In the center of this card is fitted a braſs cone, or cape, a little concave, which, being placed upon a pivot, fixed perpendicularly in the middle of the box, plays at liberty on the pivot: the top of the box is covered with a glaſs, that the motion of the card may be obſerved. The whole is incloſed in another box, where it is ſuſtained by braſs hoops, to keep it always in a horizontal poſition. See a perſpective view of it, *ibid.* N°. 2.

The invention of this inſtrument is, by ſome, attributed to one John Goia, of Amalphi, in Campania, in the kingdom of Naples, who made the card thereof to conſiſt of only eight points, *viz.* the four cardinal, and four collateral ones. Others ſay, it was the invention of the people of China; and Gilbert, in *libro de magnete*, affirms that Paulus Venetus brought it firſt into Italy, in the year 1260, having learned it from the Chineſe; and Ludi Vertomanus affirms, that when he was in the Eaſt-Indies, about the year 1500, he ſaw a pilot of a ſhip direct his courſe, by a compaſs, faſtened and formed like thoſe now commonly uſed.

And Mr. Barlow, in his navigator's ſupply, *anno* 1597, ſays, that in a perſonal conference with two Eaſt-Indians, they affirmed, that, inſtead of our compaſs, they uſe a magnetical needle of ſix inches, and longer, upon a pin, in a diſh of white china earth, filled with water, in the bottom whereof they have two croſs lines, for the principal winds, the reſt of their diviſions being left to the ſkill of their pilots.

COMPASS is alſo an inſtrument in ſurveying of land, dialling, *&c.* whoſe ſtructure is chiefly the ſame with that of the mariner's compaſs; and, like that, conſiſts of a box and needle; the principal difference being this, that, inſtead of the needle's being fitted into the card, and playing with it on a pivot, it here plays alone.

This inſtrument is of manifeſt uſe to travellers, to direct them in their road; and to miners, to ſhew them what way to dig, *&c.* but the more conſiderable uſes of this compaſs in taking the declination of a wall, in taking of angles, and plots of a field, *&c.* may be ſeen in the



Fig. 1. COLOUR.

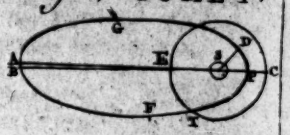


Fig. 2. COMET.

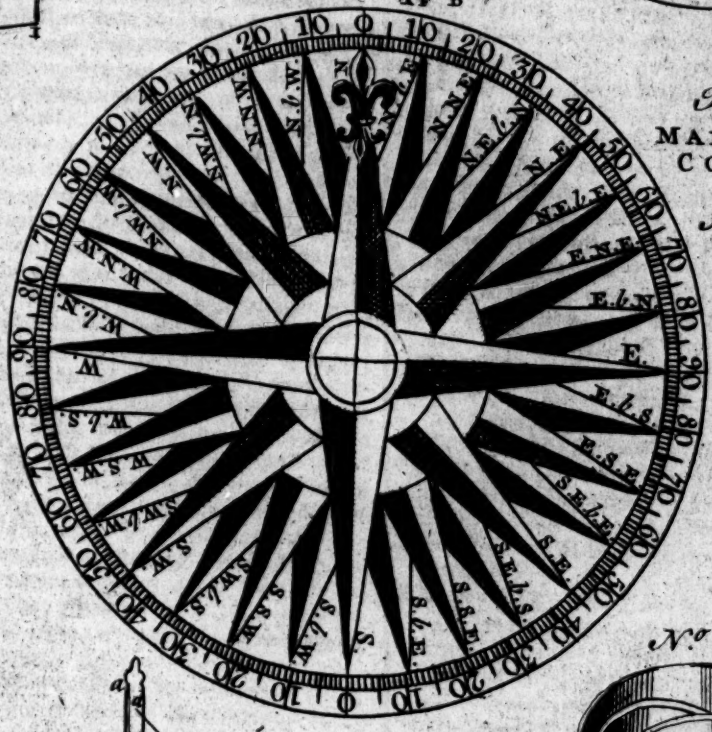


Fig. 3.
MARINER'S
COMPASS.
N.o 1.



N.o 2.

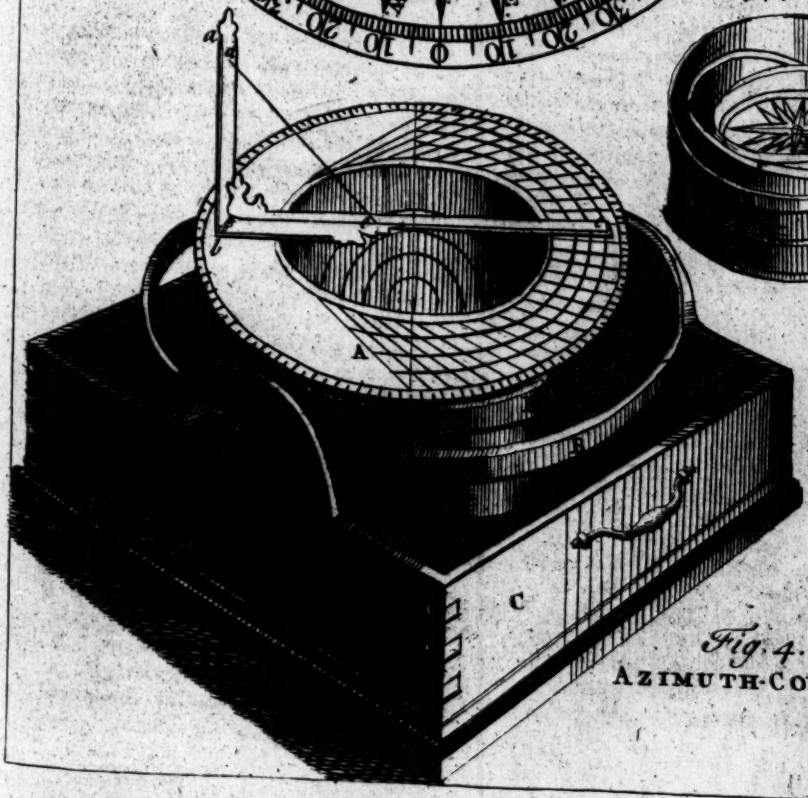


Fig. 4.
AZIMUTH-COMPASS.

T. Jefferys sculp.


BRITISH
MUSEUM

the articles SURVEYING, DIALING, CIRUMFERENTOR, &c.

Azimuth COMPASS. See the article AZIMUTH *Compaſs*.

This inſtrument conſiſts of a card, moving in a box, like a mariner's compaſs; and on the top of the box, is a concentric circle of braſs, plate XLVI. fig. 4. one ſemicircle whereof is divided into 90 equal parts, or degrees, numbering from the middle of the ſaid diviſions, both ways, with 10, 20, &c. to 45°; which degrees are alſo divided into minutes, by diagonal lines and circles: but theſe graduating lines are drawn from the oppoſite part of the circle, *viz.* from the *b* wherein the index turns in time of obſervation. *b c* is that index moveable about the point *b*, having a ſight *b a* erected thereon, which moves with a hinge, that ſo it may be raiſed or laid down, according to neceſſity. From the upper part of this ſight, down to the middle of the index, is faſtened a fine hypothenuſal lute-ſtring, or thread *d e*, to give a ſhadow upon a line that is in the middle of the ſaid index.

The reaſon of making the index move upon a pin faſtened in *b* is, that the degrees and diviſions may be larger; for now they are as large again as they would have been, if divided from the center, and the index made to move thereon; and conſequently are only 90, inſtead of 180.

The above-mentioned broad circle of braſs is croſſed at right angles, with two threads; and from the end of theſe threads are drawn four ſmall black lines, on the inſide of the round box; alſo there are four right lines drawn at right angles to each other, on the card.

This round box, thus fitted with its card, graduated circle, index, &c. is to be hung in the braſs hoops B B, and theſe hoops are faſtened to the great ſquare wooden box C C.

The uſe of the azimuth compaſs.

1. To find the ſun or ſtar's magnetic amplitude: Turn the whole compaſs-box to and fro, till each point of the braſs compaſs lies directly above its correſponding point of the compaſs card; and let the ſhip be kept ſtemming the ſame point; turn the index towards the ſun or ſtar, at its riſing or ſetting, till the two threads of the index be in a right line with the object; and that ſide of the index corrreſponding with the center of the inſtrument, will cut on the braſs circle the degree, &c. of the object's magnetic amplitude, in quantity and quality, which is beſt counted from the neareſt meridian point, eaſterly or weſterly.

2. To find the ſun or ſtar's magnetic azimuth, or what point of the compaſs the object is upon, after it is above the horizon: Turn the whole compaſs-box to and fro, till the points of the braſs compaſs coincide with thoſe on the compaſs card, and let the ſhip be ſtemming that point; turn the index towards the object, till the ſhadow of the thread fall on the backſide of the index, or you ſee the two threads in a right line with the object; then will that ſide of the index, reſpecting the center, cut on the braſs circle the object's magnetic azimuth.

COMPASS-DIALS are ſmall horizontal dials, fitted in braſs or ſilver boxes, for the pocket, to ſhew the hour of the day, by the direction of a needle, that indicates how to place them right, by turning the dial about, till the cock or ſtyle ſtand directly over the needle, and point to the northward: but theſe can never be very exact, becauſe of the variations of the needle itſelf. See the articles DIAL and NEEDLE.

COMPASSES, or *pair of* COMPASSES, a mathematical inſtrument for deſcribing circles, meaſuring figures, &c.

The common compaſſes conſiſt of two ſharp-pointed branches, or legs, of iron, ſteel, braſs, or other metal, joined at top by a rivet, whereon they move as on a center. See plate XLVII. N°. 1.

The principal perfection of this, as of all other compaſſes, conſiſts in the eaſy and uniform opening and ſhutting of their legs; one of which may be taken out, in order to make room for others.

There are now uſed compaſſes of various kinds and contrivances, accommodated to the various uſes they are intended for; as,

COMPASSES *of three legs* are, ſetting aſide the exceſs of a leg, of the ſame ſtructure with the common ones: their uſe being to take three points at once, and ſo to form triangles; to lay down three poſitions of a map, to be copied at once, &c. *ibid.* N° 2.

Beam COMPASSES conſiſt of a long branch, or beam, carrying two braſs curſors, the one fixed at one end, the other ſliding along the beam, with a ſcrew to faſten it on occaſion, *ibid.* N°. 3.

To the curſors may be ſcrewed points of any kind, whether ſteel, for pencils, or the like. It is uſed to draw large circles, to take great extents, &c.

Caliber COMPASSES. See the article CALIBER.

Clockmaker's COMPASSES are joined like the common compaſſes, with a quadrant, or bow, like the ſpring compaſſes; only of different uſe, ſerving here to keep the inſtrument firm at any opening. They are made very ſtrong, with the points of their legs of well tempered ſteel, as being uſed to draw lines on paſte-board or copper, *ibid.* N° 4.

Cylindrical and ſpherical COMPASSES, conſiſt of four branches, joined in a center, two of which are circular, and two flat, a little bent on the ends: their uſe is to take the diameter, thickneſs or caliber of round or cylindric bodies; ſuch as cannons, pipes, *&c. ibid.* N°. 5.

For the method of uſing them, ſee the article CALIBER *Compaſſes.*

Elliptic COMPASSES conſiſt of a croſs A B G H, with grooves in it, and an index C E, which is faſtened to the croſs by means of dove-tails at the points C D, that ſlide in the grooves; ſo that when the index is turned about, the end E will deſcribe an ellipſis, which is the uſe of theſe compaſſes, *ibid.* N°. 6.

German COMPASSES have their legs a little bent outwards, towards the top, ſo that when ſhut, the points only meet, *ibid.* N°. 7.

Lapidary's COMPASSES are a piece of wood, in form of the ſhaft of a plane, cleft at top, as far as half its length: with this they meaſure the angles, *&c.* of jewels and precious ſtones, as they cut them. There is in the cleft a little braſs rule, faſtened there at one end by a pin; but ſo that it may be moved in manner of a braſs level: with this kind of ſquare they take the angles of the ſtones, laying them on the ſhaft, as they cut them.

Proportional COMPASSES are ſuch as have two legs, but four points, which, when opened, are like a croſs, as not having the joint at the end of the legs like common compaſſes: ſome of theſe have fixed joints, others moveable ones; upon the legs of the latter of which are drawn the lines of chords, ſines, tangents, *&c.* as on the ſector, *ibid.* N°. 8. where A repreſents the ſimple kind, and B, that marked with the ſector lines.

Their uſe is to divide lines and circles into equal parts; or to perform the operations of the ſector, at one opening of them. See the articles SECTOR, PROPORTION, and PROPORTIONAL.

Sailor's COMPASSES, a kind much uſed by ſeamen on account of their uſefulneſs in working traverſes. Its conſtruction is repreſented, *ibid.* N°. 9.

Spring COMPASSES, or DIVIDERS, thoſe with an arched head, which by its ſpring opens the legs; the opening being directed by a circular ſcrew, faſtened to one leg, and let through the other, worked with a nut. Thoſe compaſſes are made of hardened ſteel, *ibid.* N°. 10.

Triangular COMPASSES. See the article TRIANGULAR.

Triſecting COMPASSES conſiſt of two central rules, and an arch of a circle of 120 degrees, immoveable, with its radius; which is faſtened with one of the central rules, like the two legs of a ſector, that the central rule may be carried through all the points of the circumference of the arch. The radius and rule ſhould be as thin as poſſible; and the rule faſtened to the radius ſhould be hammered cold, to attain the greater elaſticity; and the breadth of the central rule ſhould be triple that of the radius: there muſt be alſo a groove in this rule, with a dove-tail, faſtened on it, for its motion, and a hole in the center of each rule: The uſe of this inſtrument is to facilitate the triſection of angles geometrically: and it is ſaid to have been invented by M. Tarragen for that purpoſe.

Turn up COMPASSES. The body of this inſtrument is like the common compaſſes, but towards the bottom of the legs, without ſide, are added two other points, beſides the uſual ones: the one whereof carry a drawing pen-point, the other a portcraion, both adjuſted ſo as to turn round, and ſo be in the way of uſe, or out of it, as occaſion requires. Theſe compaſſes have been contrived in order to ſave the trouble of changing the points.

COMPEIGN, a city of France, ſituated on the river Oyſe, about forty-five miles north-eaſt of Paris: eaſt longitude 3°, north latitude 49° 30'.

COMPENDIUM, in matters of literature, denotes much the ſame with epitome, or abridgment. See ABRIDGMENT.

COMPENSATION, in a general ſenſe, an action whereby any thing is admitted as an equivalent to another.

COMPENSATION, in the civil law, a ſort of right, whereby a debtor, ſued by his creditor for the payment of a debt, demands that the debt may be compenſated with what is owing him by the creditor, which, in

in that caſe, is equivalent to payment.

COMPERTORIUM, in the civil law, ſignifies a judicial inqueſt made by delegates to ſearch out and relate the truth of a caſe.

COMPETENCE, or COMPETENCY, in law, the right or authority of a judge, for taking cognizance of any matter. See the article JURISDICTION.

COMPITALIA, or COMPITALITIA, in roman antiquity, feaſts inſtituted by Servius Tullius in honour of the Lares. See the article LARES.

Theſe feaſts were obſerved on the 12th of January, and 6th of March.

Tarquinius Superbus, conſulting the oracle upon the ſubject of the ſacrifices to be offered on that occaſion, was anſwered that he ſhould offer heads to the Lares: for which reaſon, the Romans preſented the heads of young children in ſacrifice to thoſe deities. But Junius Brutus ordered poppy heads to be offered in their ſtead. Macrobius relates, that they ſatisfied the Lares, by offering the images of men and women made in ſtraw; and that for each ſlave in their family, they threw in ſo many bales of wool.

COMPLEMENT, in aſtronomy, the diſtance of a ſtar from the zenith: or the arch comprehended between the place of the ſtar above the horizon, and the zenith.

COMPLEMENT, in geometry, is what remains of a quadrant of a circle, or of 90°, after any certain arch has been taken away from it. Thus, if the arch taken away be 40°, its complement is 50: becauſe 50+40=90. The ſine of the complement of an arch is called the co-ſine, and, that of the tangent, the co-tangent, *&c.*

COMPLEMENT *of the courſe*, in navigation, is the number of points the courſe wants of 90°, or eight points, *viz.* of a quarter of the compaſs. See *Mariner's* COMPASS.

COMPLEMENT *of the curtin*, in fortification, is that part of it which makes the demigorge. See the articles CURTIN and DEMIGORGE.

COMPLEMENT *of the line of defence*, is the remainder of the line of defence, after the angle of the flank is taken off. See the articles ANGLE and DEFENCE.

COMPLEMENTS *in a parallelogram*, are the two ſmaller parallelograms GAE, FCE (plate XLIX. fig. 2.) made by drawing two right lines GE, and FE, through the point E, in the diagonal; and parallel to the ſides AB, BC, of a parallelogram ABCD.

In every parallelogram, theſe complements are equal. See PARALLELOGRAM.

COMPLEX, in a more general ſenſe, a term ſynonymous with compound, tho' in ſtrictneſs of ſpeech there is ſome difference. See the article COMPOUND.

COMPLEX *terms, or ideas*, in logic, are ſuch as are compounded of ſeveral ſimple ones. See the articles TERM and IDEA.

Complex ideas are often conſidered as ſingle and diſtinct beings, tho' they may be made up of ſeveral ſimple ideas, as a body, a ſpirit, a horſe, a flower: but when ſeveral of theſe ideas of a different kind are joined together, which are wont to be conſidered as diſtinct, ſingle beings, they are called a compounded idea, whether theſe united ideas be ſimple or complex. Complex ideas, however compounded and recompounded, tho' their number be infinite, and their variety endleſs, may be all reduced under theſe three heads, modes, ſubſtances, and relations.

COMPLEX *propoſition*, is either that which has at leaſt one of its terms complex, or ſuch as contains ſeveral members, as cauſal propoſitions: or it is ſeveral ideas offering themſelves to our thoughts at once, whereby we are led to affirm the ſame thing of different objects, or different things of the ſame object. Thus, *God is infinitely wiſe, and infinitely powerful.* In like manner, in the propoſition, *Neither kings nor people are exempt from death.*

COMPLEXION, *complexio*, among phyſicians, the temperament, habitude, and natural diſpoſition of the body, but more often the colour of the face and ſkin.

A fair, florid, and clear complexion, ſhow the purity and pellucidneſs of the lymphatic fluids: if it be livid, lurid, and yellow, they diſcover a ſalino-ſulphureous impurity of the ſame, and a diſordered ſecretion in the proper organs, eſpecially the liver. In regard to the natural diſpoſition of the body, antient phyſicians and philoſophers diſtinguiſhed four principal complexions in man, *viz.* the ſanguine complexion, anſwering to the air, and ſuppoſed to have the qualities thereof, as being hot and moiſt; the phlegmatic complexion, being cold and moiſt, correſponding with water; the bilious and choleric complexion, being hot and dry, ſuppoſed of the nature of a fire; and the melancholic complexion, being cold and dry, partaking of the nature of earth. However, theſe diſtinctions are at preſent little regarded.

COMPLEXION, in logic, a term ſometimes applied to the ſecond operation of the mind, called judgment. See the article JUDGMENT.

COMPLEXION, in metaphyſics, the union or coalition of ſeveral things different from each other, either really or imaginary.

COMPLEXION, in rhetoric, a figure including a repetition and a converſion at the ſame time, the ſentence both beginning and ending with the ſame word. See REPETITION and CONVERSION.

COMPLEXUS, in anatomy, a broad and pretty long muſcle, lying along the back-part and ſide of the neck: it is fixed below to the vertebræ of the neck, and above, to the upper tranſverſe line of the os occipitis. There is one of theſe on each ſide; and both acting together, they pull the head directly backwards; whereas, if only one acts, it draws the head obliquely back.

COMPLEXUS MINOR, in anatomy, a narrow, long, and ſlender muſcle, lying along the inſide of the neck, and otherwiſe called *maſtoidæus lateralis*. See the article MUSCLE.

COMPLICATION, in general, denotes the blending, or rather interweaving, of ſeveral different things together: thus a perſon afflicted with ſeveral diſorders at the ſame time, is ſaid to labour under a complication of diſeaſes.

COMPONED, COMPONE, or GOBONY, in heraldry, is ſaid of a bordure made up of angular parts, or chequers, of two different colours. See plate LIV. fig. 1.

Counter-COMPONED. See COUNTER.

COMPOS, or rather NON COMPOS, in law. See NON COMPOS MENTIS.

COMPOSITE, in general, denotes ſomething compounded or made up of ſeveral others united together. Thus,

COMPOSITE NUMBERS, are ſuch as can be meaſured exactly by a number exceeding unity; as 6 by 2 or 3, or 10 by 5, *&c.* ſo that 4 is the loweſt compoſite number. Compoſite numbers, between themſelves, are thoſe which have ſome common meaſure beſides unity; as 12 and 15, as being both meaſured by 3.

COMPOSITE ORDER, in architecture, the leaſt of the five orders of columns; ſo called becauſe its capital is compoſed out of thoſe of the other columns, borrowing a quarter round from the tuſcan and doric, a row of leaves from the corinthian, and volutes from the ionic. Its corniche has ſimple modillions or dentils. It is alſo called the roman or italic order, as having been invented by the Romans. By moſt authors it is ranked after the corinthian, either as being the next richeſt, or the laſt invented.

Scamozzi, and after him M. Le Clerc, make the column of this order nineteen modules and a half, being leſs by half a module than that of the corinthian, as in effect the order is leſs delicate than the corinthian. Vignola makes it twenty, which is the ſame with that of his corinthian: but Serlio, who firſt formed it into an order, by giving it a proper entablature and baſe, and after him M. Perrault, raiſe it ſtill higher than the corinthian. See plate XLVIII.

M. Perrault, in his Vitruvius, makes a diſtinction between the compoſite and compoſed order. The latter, he ſays, is any compoſition whoſe parts and ornaments are extraordinary and unuſual; but have, withal, ſomewhat of beauty, both on account of their novelty, and in reſpect of the manner or genius of the architect: ſo that a compoſed order is an arbitrary, humorous compoſition, whether regular, or irregular.

For the parts of this order, ſee the articles BASE, CAPITAL, COLUMN, ENTABLATURE, FRIEZE, PEDESTAL, *&c.*

COMPOSITION, *compoſitio*, in a general ſenſe, the uniting or putting together ſeveral things, ſo as to form one whole, called a compound.

COMPOSITION *of ideas*, an act of the mind, whereby it unites ſeveral ſimple ideas into one conception, or complex idea.

When we are provided with a ſufficient ſtock of ſimple ideas, and have, by habit and uſe, rendered them familiar to our minds, they become the component parts of other ideas, ſtill more complicated; and form, what we may call, a ſecond order of compound notions. This proceſs, as is evident, may be continued to any degree of compoſition we pleaſe, mounting from one ſtage to another, and enlarging the number of combinations.

COMPOSITION, in grammar, the joining of two words together; or prefixing a particle to another word, to augment, diminiſh, or change its ſignification. See the article WORD.

COMPOSITION, in logic, a method of reaſoning, whereby we proceed from ſome general

general ſelf-evident truth, to other particular and ſingular ones.

In diſpoſing and putting together our thoughts, there are two ways of proceeding, equally within our choice: for we may ſo propoſe the truths, relating to any part of knowledge, as they preſented themſelves to the mind, in the manner of inveſtigation; carrying on the ſeries of proofs in a reverſe order, till they, at laſt, terminate in firſt principles: or beginning with theſe principles we may take the contrary way, and from them deduce, by a direct train of reaſoning, all the ſeveral propoſitions we want to eſtabliſh.

This diverſity, in the manner of arranging our thoughts, gives riſe to the twofold diviſion of method eſtabliſhed among logicians, the one called analytic method, or the method of reſolution, inaſmuch as it traces things back to their ſource, and reſolves knowledge into its firſt and original principles. This method ſtands in contradiſtinction to the method of compoſition; or, as it is otherwiſe called, the ſynthetic method: for here we proceed by gathering together the ſeveral ſcattered parts of knowledge, and combining them into one ſyſtem, in ſuch a manner, as that the underſtanding is enabled diſtinctly to follow truth through all the different ſtages of gradations.

COMPOSITION, in muſic, the art of diſpoſing muſical ſounds into airs, ſongs, &c. either in one or more parts, to be ſung by a voice, or played on inſtruments. See the articles MUSIC and SONG.

Under compoſition are comprehended the rules. 1. Of melody, or the art of making a ſingle part; that is, contriving and diſpoſing the ſimple ſounds, ſo as that their ſucceſſion and progreſſion may be agreeable to the ear. See MELODY.

2. Of harmony, or the art of diſpoſing and concerting ſeveral ſingle parts together, ſo as that they make one agreeable whole. See the article HARMONY.

It may be proper to obſerve here, that melody being chiefly the buſineſs of the imagination, the rules of its compoſition ſerve only to preſcribe certain limits to it, beyond which the imagination, in ſearching out the variety and beauty of airs, ought not to go: but harmony being the work of the judgment, its rules are more certain and extenſive, and more difficult in practice.

COMPOSITION, in oratory, the coherence and order of the parts of a diſcourſe.

To compoſition belong both the artful joining of the words, whereof the ſtile is formed, and whereby it is rendered ſoft and ſmooth, gentle and flowing, full and ſonorous; or the contrary; and the order, which requires things firſt in nature and dignity, to be put before thoſe of inferior conſideration.

COMPOSITION, in painting, conſiſts of two parts, invention and diſpoſition; the firſt whereof is the choice of the objects, which are to enter into the compoſition of the ſubject the painter intends to execute, and is either ſimply hiſtorical or allegorical. See the article INVENTION.

The other very much contributes to the perfection and value of a piece of painting.

COMPOSITION, in pharmacy, the method of mixing and compounding medicines of different qualities, ſo that they may aſſiſt each other's virtues, or ſupply each other's defects. See PHARMACY.

COMPOSITION, in commerce, a contract between an inſolvent debtor and his creditors, whereby the latter accept of a part of the debt in compenſation for the whole, and give a general acquittance accordingly.

COMPOSITION, in printing, commonly termed compoſing, the arranging of ſeveral types or letters, in the compoſing-ſtick, in order to form a line; and of ſeveral lines ranged in order in the galley, to make a page; and of ſeveral pages, to make a form.

Generally the compoſing-ſtick is made of iron, ſometimes of wood, more or leſs in length or depth, according to the page to be compoſed, or the fancy of the compoſitor. It has two ſliding pieces, faſtened by means of a nut and ſcrew, which are ſliped forwards or backwards, according to the ſpace which the lines, notes, &c. are to take up, or the compoſitor thinks proper. The compoſing-ſtick ordinarily contains ſeven or eight lines of a middle ſized letter: theſe lines, when ſet, are taken out, by means of a thin ſlip of braſs, called a rule, and diſpoſed in the galley: then others are compoſed, until a page is formed, which being done, it is tied up and ſet by; the reſt of the pages that make up a ſheet, being prepared in the ſame manner, are carried to the impoſing or correcting-ſtone, and being there ranged in order, they are diſpoſed in an iron frame, fitted with wooden furniture: then the quoins being ſtruck in, the chaſe, or frame, is put in the preſs,

in

in order to their being printed. See the article PRINTING, &c.

COMPOSITION *of motion*, is an aſſemblage of ſeveral directions of motion, reſulting from ſeveral powers acting in different, though not oppoſite, directions.

The doctrine of compoſition and reſolution of motion, is founded on Sir Iſaac Newton's ſecond law of nature, *viz.* "The change of motion is always "proportionable to the moving force "impreſſed, and is always made ac- "cording to the right line in which "that force is impreſſed."

Let the body B (plate XLIX. fig. 4.) be impelled by the body A, in the direction *b c*, with a force that would, in a given time, cauſe it to move from *b* to *c*; at the ſame inſtant let another body C ſtrike it in the direction *b d*, with a force that will carry it from *b* to *d*, in the ſame time: then completing the parallelogram *b c e d*, and drawing the diagonal *b e*, this laſt will repreſent the direction and diſtance through which the body will move, in the ſame time, by both the forces conjointly.

This is evident, if we conſider that the force impreſſed by the body C, does no way diminiſh the velocity of a body approaching to the line *c e*, at the end of the given time, and therefore it will then be found ſomewhere in the ſaid line *c e*: for the ſame reaſon it will, at the end of the ſaid time, be carried to a diſtance from *b c* equal to *b d*; and therefore it muſt alſo, at the ſame moment, be found ſomewhere in the line *d e*; but it cannot be in the lines *c e* and *d e* at the ſame time, unleſs in that point *e*, where they interſect each other, as the propoſition aſſerts.

We may now conceive the body B moving by the ſingle impulſe of ſome power in the direction *b e*, ſuch as will carry it through the ſpace *b e* in a given time; then this may be reſolved into any other two forces acting in the directions *b e* or *d e*, and *b d* or *c e*, which lines will alſo repreſent the efficacy of the ſaid forces in the ſame time.

COMPOSITION *of proportion*, is the comparing the ſum of the antecedent and conſequent, with the conſequent in two equal ratios; as ſuppoſe, 4 : 8 :: 3 : 6, they ſay, by compoſition of proportion, 12 : 8 :: 9 : 6.

The ſame holds of the ſum of the antecedent and conſequent, compared with the antecedent: thus we likewiſe ſay, 12 : 4 :: 9 : 3.

There is a great difference between compoſition of proportion by addition and by multiplication. See PROPORTION.

COMPOST, in huſbandry and gardening, ſeveral ſorts of ſoils, or earthy matter, mixed together, in order to make a manure, for aſſiſting the natural earth in the work of vegetation, by way of amendment or improvement.

Compoſts are various, and ought to be different, according to the different nature or the quality of the ſoils which they are deſigned to meliorate, and according as the land is either light, ſandy, looſe, heavy, clayey, or cloddy. A light, looſe land, requires a compoſt of a heavy nature, as the ſcouring of deep ditches, ponds, &c. ſo, on the other hand, a land that is heavy, clayey, or cloddy, requires a compoſt of a more ſprightly and fiery nature, that will inſinuate itſelf into the lumpiſh clods, which, if they are not thus managed, would very much obſtruct the work of vegetation. See CLAY, &c.

The great uſe of compoſts, is for ſuch plants as are preſerved in pots, or tubs; or ſometimes it is uſed for ſmall beds, or borders of flower-gardens: but it is too expenſive to make compoſts for large gardens, where great quantities of ſoil is required. In making of compoſts, great care ſhould be had that the ſeveral parts are properly mixed together, and not to have too much of any one ſort thrown together.

COMPOSTELLA, the capital of Galicia, in Spain, remarkable for the devotion paid there by pilgrims from all countries, to the relics of St. James.

COMPOSTO, in muſic, means compounded or doubled, as a fifteenth is an octave doubled, or an octave is compounded of a fifth and a fourth.

COMPOUND, in a general ſenſe, an appellation given to whatever is compoſed, or made up of different things: thus we ſay, a compound word, compound ſound, compound taſte, compound force, &c. See the articles WORD, SOUND, &c.

COMPOUND-FLOWER, one conſiſting of ſeveral diſtinct leſſer flowers, or corollulæ, each furniſhed with a ſtyle, ſtamina, &c. See the article FLOWER.

The corollulæ are of two kinds, *viz.* tubulated, and ligulated: the tubulated ones are always furniſhed with a campanulated limb, divided into four or five

ſegments; whereas the ligulated corollulæ have only a flat, linear limb, terminated by a ſingle point, or by a broader extremity, divided into three or five ſegments.

The plants with compound flowers are extremely numerous, forming a claſs by themſelves, called by Linnæus ſyngeneſia. See the article SYNGENESIA.

COMPOUND-INTEREST. See the article INTEREST.

COMPOUND-MOTION, that effected by the concurring action of ſeveral different powers. Thus if one power act in the direction of, and with a force proportional to the end of a parallelogram; and another act in the direction of, and with a force proportional to its ſide, the compound motion will be in the direction of, and proportional to, the diagonal of the ſaid parallelogram. See COMPOSITION.

COMPOUND NUMBERS, thoſe which may be divided by ſome other number beſides unity, without leaving any remainder: ſuch are 18, 20, &c. the firſt being meaſured by the numbers 2, 6, or 9; and the ſecond, by the numbers 2, 4, 5, 10.

COMPOUND PENDULUM, QUANTITIES, &c. See the articles PENDULUM, QUANTITY, &c.

COMPREHENSION, in logics, the ſame with apprehenſion.

COMPREHENSION, or SYNECDOCHE, a trope or figure in rhetoric, which puts the name of the whole for a part; or of a part for the whole; a general for a particular of the ſame kind; or a particular for a general. By this trope a round and certain number is often ſet down for an uncertain one.

COMPRESS, in ſurgery, a bolſter of ſoft linen cloth, folded in ſeveral doubles, frequently applied to cover a plaſter, in order not only to preſerve the part from the external air, but alſo the better to retain the dreſſings, or medicines.

Compreſſes are frequently applied where no plaſter is made uſe of; and that ſometimes dry, ſometimes wetted with certain liquors, which are ſuppoſed to be ſtrengthening, reſolving, lenient, emollient, or cooling, which are adminiſtred hot or cold, as the circumſtances of the caſe ſhall require. Compreſſes of all kinds are intended for theſe purpoſes. 1. To preſerve and cheriſh the natural heat of the body. 2. To ſecure the dreſſings that lie under them. 3. To convey liquid remedies to parts wounded, or otherwiſe diſordered, and to prolong the uſe of them. 4. To fill up any cavity or depreſſions of the parts; and, 5. To prevent bandages from bringing on a troubleſome itching, or other pain or uneaſineſs upon the ſkin.

COMPRESSED, in general, is ſaid of things whoſe ſides are ſqueezed together, and conſequently of a broad and flat figure.

COMPRESSED LEAF, among botaniſts, one with a mark or impreſſion on both ſides. See the article LEAF.

COMPRESSION, the act of preſſing or ſqueezing ſome matter, ſo as to ſet its parts nearer to each other, and make it poſſeſs leſs ſpace.

It is different from condenſation, in that compreſſion is performed with ſome external violence, but condenſation by the action of cold. Thus the moderns ſay, that pumps do really act by compreſſion, whereas the antients imagined they acted by ſuction: the embolus, or ſucker, going and returning in a narrow tube, compreſſes the air incloſed in it, ſo as to enable it to raiſe the valve by the force of the elaſticity, and make its eſcape; upon which, the balance being deſtroyed, the preſſure of the atmoſphere on the ſtagnant ſurface, drives up the water into the tube, thus evacuated of its air. See the article PUMP.

Water is incapable of being compreſſed, and no art or violence is able to bring its parts cloſer, or make it take up leſs ſpace, after the air has been once purged out of it. It has been found by an experiment, made by the academy del Cimento, that water, being violently ſqueezed, made its way through the infinitely ſmall pores of a ball of gold, rather than undergo a compreſſion. The compreſſion of air, by its own weight, is ſurpriſingly great, for it appears, by calculation, that the common air we breathe near the ſurface of the earth, is preſſed by a weight of the ſuperincumbent atmoſphere into $\frac{1}{13760}$ part of the ſpace it would take up, if it were at liberty. See the article ATMOSPHERE.

But the air may be ſtill further compreſſed by art; and it appears by Mr. Boyle's experiments, that the ſpace which the air takes up when at its utmoſt dilatation, is to that which it takes up when moſt compreſſed, as 520000 to 1. See AIR.

COMPRESSOR, in anatomy, a muſcle of the face, more uſually known by the name of elevator alæ naſi.

COMPRINT, among booksellers, ſigni-

fies a ſurreptitious printing of another's copy, in order to gain thereby, which is expreſsly contrary to ſtatute 14 Car. II.

COMPRISE, or NIENT COMPRISE. See the article NIENT COMPRISE.

COMPROMISE, a treaty, or contract, whereby two contending parties eſtabliſh one or more arbitrators, to judge of and terminate their difference in an amicable way.

The regular way of appointing a compromiſe is by writing, expreſſing the names of the arbitrators, the power of chooſing an umpire, or ſuperior arbitrator, in caſe of need, a time limited for the arbitrage, and a penalty on the party that does not abide by the deciſion.

By the civil law, a ſlave cannot make a compromiſe without the leave of his maſter, nor a pupil without the authority of his guardian, or a wife without that of her huſband: ſo a ſlave, a deaf or dumb man, a minor, and the perſon who is a party in the cauſe, are incapable of being choſen arbitrators in a compromiſe.

The occaſions on which a compromiſe is not always allowed of, are reſtitutions, marriage cauſes, criminal affairs, queſtions of ſtate, and, generally, any thing wherein the public intereſt is more concerned than that of private perſons.

COMPROMISE is alſo uſed in beneficiary matters; where it ſignifies an act, whereby thoſe who have the right of election, transfer it to one or more perſons, to elect one capable of the office or dignity.

COMPTING, or COMPTING-*Houſe*, an office, in the king's houſhold, under the direction of the lord-ſteward; ſo called, becauſe the accounts for all expences of the king's houſhold are there taken daily by the lord ſteward, comptroller, cofferer, maſter of the houſhold, the two clerks of the green-cloth, and the two clerks comptrollers. They alſo make proviſion for the houſhold, and make payments and orders for the good government thereof.

In the Counting-houſe is the board of green cloth.

COMPTROL, or CONTROL. See the article CONTROL.

COMPTROLLER, or CONTROLLER. See the article CONTROLLER.

COMPULSOR, an officer under the roman emperors, diſpatched from court into the provinces, to compel the payment of taxes, &c. not paid within the time preſcribed.

Theſe were charged with ſo many exactions, that Honorius caſhiered them.

COMPUNCTION, in theology, an inward grief of mind, for having offended God.

The roman catholics think their confeſſions inſignificant, unleſs attended with compunction, or inward grief of mind. Compunction, among ſpiritualiſts, implies not only a grief for having offended God, but alſo a pious ſenſation of grief, ſorrow, and diſpleaſure, on other motives.

COMPURGATOR, in law, a perſon that by oath juſtifies or clears another's innocence.

COMPUTATION, in a general ſenſe, the manner of eſtimating time, weights, meaſure, monies, or quantities of any kind. See the article COIN, &c.

COMPUTATION, among mathematicians, is uſed in the like ſenſe as calculation. See the article CALCULATION.

COMPUTATION *of a planet's motion*. See the article PLANET.

COMPUTATION, in law, is uſed in reſpect of the true account or conſtruction of time, ſo underſtood, as that neither party to an agreement, &c. may do wrong to the other; and that the determination of time be not left at large, or taken otherwiſe than according to the judgment and intention of law.

If a leaſe is ingroſſed, bearing date January 1, 1754, to have and to hold for three years, from henceforth, and the leaſe is not executed till the ſecond of January; in this caſe, the words from henceforth, ſhall be accounted from the delivery of the deed, and not by any computation from the date. And if the leaſe be delivered at four of the clock in the afternoon on the ſaid ſecond day, it ſhal end the firſt day of January, in the third year; the law, in ſuch computations, rejecting all fractions or diviſions of the day.

COMPUTO, in law, a writ to compel a bailiff, receiver, or accountant, &c. to deliver up his accounts.

The ſame lies for executors of executors, and againſt the guardian in ſocage for waſte made in the minority of the heir.

CONARION, or CONOIDES, a name for the pineal gland, a ſmall gland about the bigneſs of a pea, placed in the upper part of that hole in the third ventricle of the brain, called the anus, and tied by ſome fibres to the nates. See the articles BRAIN, and PINEAL GLAND.

CONATUS,

CONATUS, a term frequently uſed in philoſophy and mathematics, defined by ſome to be a quantity of motion, not capable of being expreſſed by any time, or length; as the *conatus recedendi ab axe motus*, is the endeavour which a body, moved circularly, does to recede, or fly off, from the center or axis of its motion. The conatus centrifugus, ſometimes called the conatus excuſſorius, is always expreſſed by the verſed ſine of the angle of circulation: theſe conatus of bodies, revolving in equal circles, with an equable motion, are in a duplicate ratio, or as the ſquares of their velocities: but if the bodies revolve in unequal circles, their conatus centrifugi will be in a ratio compounded of the ratios of the ſquares of the velocities directly; and the ſimple ratio of the radii of theſe circles inverſely. If the body deſcribe equal areas in equal times, as in the caſe of the planets, which revolve in ellipſes round the ſun, then the conatus centrifugi will be reciprocally as the cubes of the radii. See the articles MOTION, CENTRIFUGAL, *&c.*

CONCATENATION, a term chiefly uſed in ſpeaking of the mutual dependence of ſecond cauſes upon each other. See CAUSE.

CONCAVE, an appellation uſed in ſpeaking of the inner ſurface of hollow bodies, but more eſpecially of ſpherical ones.

CONCAVE GLASSES, ſuch as are ground hollow, and are uſually of a ſpherical figure, tho' they may be of any other, as parabolical, *&c.* All objects ſeen through concave glaſſes, appear erect and diminiſhed. The confuſed appearance of a point, through any concave glaſs, proceeds from the too great divergency of thoſe rays which fall on the eye: wherefore, ſince the more remote the eye is from the glaſs, the leſs will the rays diverge; then the further the eye is from the concave glaſs, the more diſtinct will be the appearance of any object through it, though the more faint.

The apparent place of objects ſeen through concaves is always brought nearer to the eye, which is the reaſon they help ſhort ſighted perſons, or ſuch as can ſee diſtinctly only thoſe objects that are very near them. The rule to fit concave glaſſes to the eye of a near-ſighted perſon, is this: let him obſerve nicely the diſtance at which he can read letters, or ſee objects diſtinctly, which ſuppoſe to be at twelve feet; then will a concave glaſs, whoſe virtual focus is a foot diſtant from it, make that perſon ſee diſtant objects diſtinctly. The farther the eye is removed from any concave glaſs, the leſs the object appears, and a leſſer area of it is ſeen; and when the glaſs is exactly in the middle, between the eye and the object, the object will appear the moſt diminiſhed, that the diſtance between the eye and the object will admit of. See the articles FOCUS, LENS, and MIRROR.

CONCAVITY, that property of bodies, on account of which they are denominated concave. See the preceding article.

An arch of a curve has its concavity turned one way, when the right lines that join any two of its points are all on the ſame ſide of the arch.

Archimedes, intending to include ſuch lines as have rectilinear parts, in his definition, ſays, a line has its concavity turned one way, when the right lines that join any two of its points are either all upon one ſide of it, or while ſome fall upon the line itſelf, none fall upon the oppoſite ſide.

When two lines, having their concavity turned the ſame way, have the ſame terms, and the one includes the other, or has its concavity towards it, the perimeter of that which includes, is greater than the perimeter of that which is included.

CONCAVITY alſo denotes the whole ſpace included with a concave ſurface, or the inner bend of a curve line.

CONCEALERS, in law, ſuch perſons as find out concealed lands; that is, lands that are ſecretly kept from the king, by common perſons that have nothing to ſhew for their eſtate or title therein.

CONCENTRATION, in general, ſignifies the bringing things nearer a center. Hence the particles of ſalt, in ſea water, are ſaid to be concentrated; that is, brought nearer each other, by evaporating the watery part: thus, alſo, wine is ſaid to be concentrated, when its watery parts are ſeparated in the form of ice by froſt.

Dr. Shaw, in his eſſay on the diſtillery, is for introducing a method of concentrating the fermentable parts of vegetables, from which their ſpirits are to be drawn by diſtillation; which, if it can be brought to be practiſed in the large way, will prove of very great uſe to the britiſh diſtillery, as it will greatly ſhorten the diſtiller's buſineſs, which at preſent, including the brewing, fermenting, *&c.* is much

too long. He propoſes only to evaporate carefully the wort, or other tinctures or decoctions of vegetables made for the diſtilling of their ſpirits, to the conſiſtence of treacle: in this form they might be ſold to the diſtiller, who might keep them by him as long as he pleaſed, and occaſionally uſe them, by the eaſy method of reducing them into wort, by mixing warm water with them.

Some uſe the term concentration for the moſt intimate mixture, when the particles are not only brought within contact, but penetrate into each other.

CONCENTRIC, in mathematics, ſomething that has the ſame common center with another: it ſtands in oppoſition to excentric. See CENTER and EXCENTRIC. Concentric is chiefly uſed in ſpeaking of round bodies and figures, or circular and elliptical ones, *&c.* but may be likewiſe uſed for polygons, drawn parallel to each other upon the ſame center. The method of Nonius for graduating inſtruments conſiſts in deſcribing with the ſame quadrant 45 concentric arches, dividing the outermoſt into 90 equal parts, the next into 89, *&c.*

CONCEPTACULUM, among botaniſts, a kind of pericarpium, compoſed of ſoft and leſs rigid valves, and containing only one cavity.

CONCEPTION, among phyſicians, *&c.* denotes the firſt formation of an embryo in the womb of its parent, who from that time becomes pregnant. See the articles GENERATION and PREGNANCY.

Immaculate CONCEPTION, a feſtival in the romiſh church, obſerved on the 8th of December, in commemoration of the holy virgin's having been conceived and born immaculate, or without original ſin. The immaculate conception of the virgin, though reckoned a pious opinion, is no article of faith in the romiſh church, ſeveral of whoſe members have oppoſed it.

CONCEPTION *of our lady*, a religious order in Portugal, founded in the XVth century. This order has ſince paſſed into Italy, and got footing in Rome and Milan. The religious, beſides the grand office of the franciſcans, recited on ſundays and holydays, have a leſſer office, called the office of the conception of the holy virgin.

CONCEPTION, in logic, is the ſimple apprehenſion or perception which we have of any thing, without proceeding to affirm or deny any thing about it.

There are rules by which we may guide and regulate our conceptions of things, which is the main buſineſs in logic; for moſt of our errors in judgment, and the weakneſs, fallacy, and miſtakes of our argumentation, proceed from the darkneſs, confuſion, defect, or ſome other irregularity in our conceptions. The rules are theſe; 1. To conceive of things clearly and diſtinctly in their own natures. 2. Completely in all their parts. 3. Comprehenſively in all their properties and relations. 4. Extenſively in all their kinds. 5. Orderly, or in a proper method.

CONCEPTION, in geography, a city of Chili, in South America, ſituated on the Pacific ocean, in 79° weſt longitude, and 37° ſouth latitude.

CONCEPTION is alſo the capital of the province of Veragua, in Mexico, about one hundred miles weſt of Porto Bello: weſt longitude 83°, and north latitude 10°.

CONCERT, or CONCERTO, in muſic, a number or company of muſicians, playing or ſinging the ſame piece of muſic or ſong, at the ſame time.

A concert for any inſtrument, as organ, harpſichord, violin, *&c.* is a piece of muſic, wherein either of thoſe inſtruments has the greateſt part; or in which the performance is partly alone, and partly accompanied by the other parts.

CONCERTANTE, thoſe parts of a piece of muſic, that ſing or play throughout the whole piece, either alone or accompanied, to diſtinguiſh theſe parts that play now and then in particular places.

CONCERTATO intimates the piece of muſic to be compoſed in ſuch a manner, as that all the parts may have their recitativos, be it for two, three, four, or more voices or inſtruments.

CONCERTO GROSSI, the grand chorus of a concert, or thoſe places where all the ſeveral parts perform or play together.

CONCESSI, in law, a term frequently uſed in conveyances. Its effect is to create a covenant, as *dedi* does a warranty.

CONCESSION, in rhetoric, a figure, whereby ſomething is freely allowed, that yet might bear diſpute, to obtain ſomething that one would have granted to him, and which he thinks cannot fairly be denied, as in the following conceſſion of Dido, in Virgil:

"The nuptials he diſclaims, I urge no more;
"Let him purſue the promiſ'd latian ſhore.
"A ſhort delay is all I aſk him now;
"A pauſe of grief, an interval from woe."

CONCHA, a genus of bivalve ſhells, the animal inhabiting which is called tethys. See the article TETHYS.

This is a very comprehenſive genus, compriſing the oyſter, chama, muſcle, heart-ſhell, pecten, ſolen, &c. See the articles OYSTER, CHAMA, &c.

CONCHA SPECTRORUM, the SPECTRE-SHELL, a ſpecies of voluta. See the article VOLUTA.

CONCHA, in anatomy, the larger cavity of the external ear, ſituated before the meatus auditorius, or paſſage into the internal ear.

CONCHITES, in natural hiſtory, a petrified ſhell, of the concha-kind. See the article CONCHA.

CONCHOID, in geometry, the name of a curve, given it by its inventor, Nicomedes, and is thus generated.

Draw the right line Q Q (plate XLIX. fig. 3.) and A C perpendicular to it in the point E; and from the point C draw many right lines C M, cutting the right line Q Q in Q; and make Q M = Q N, A E = E F, *viz.* equal to an invariable line: then the curve, wherein are the points M, is called the firſt conchoid; and the other, wherein are the points N, the ſecond; the right line Q Q being the directrix, and the point C the pole: and from hence it will be very eaſy to make an inſtrument to deſcribe the conchoid.

The line Q Q is an aſymptote to both the curves, which have points of contrary flection. See the article ASYMPTOTE.

If Q M = A E = a, E C = b, M R = E P = x, E R = P M = y; then will $a^2b^2 - 2a^2bx + a^2x^2 = b^2x^2 - 2bx^3 + x^4 + x^2y^2$, and expreſs the nature of the ſecond conchoid; and $x^4 + 2bx^3 + y^2x^2 + b^2x^2 = a^2b^2 + 2a^2bx + a^2x^2$, the nature of the firſt; and ſo both theſe curves are of the third kind.

This curve was uſed by Archimedes and other antients, in the conſtruction of ſolid problems; and Sir Iſaac Newton ſays that he himſelf prefers it before other curves, or even the conic ſections, in the conſtruction of cubic and biquadratic equations, on account of its ſimplicity and eaſy deſcription, ſhewing therein the manner of their conſtruction by help of it.

CONCHYLIA, a general name for all kinds of petrified ſhells, as limpets, cochlea, nautili, conchæ, lepades, &c.

CONCIATOR, the perſon who proportions and regulates the ſeveral ingredients which go to the making of cryſtal. See the article CRYSTAL.

CONCINNOUS INTERVALS, in muſic, are ſuch as are fit for muſic, next to, and in combination with, concords; being neither very agreeable, nor diſagreeable in themſelves, but having a good effect, as by their oppoſition they heighten the more eſſential principles of pleaſure; or as by their mixture and combination with them, they produce a variety neceſſary to our being better pleaſed.

CONCINNOUS SYSTEM, in muſic. A ſyſtem is ſaid to be concinnous, or divided concinnouſly, when its parts, conſidered as ſimple intervals, are concinnous; and are beſides placed in ſuch an order between the extremes, as that the ſucceſſion of ſounds, from one extreme to the other, may have an agreeable effect.

CONCLAMATION, in roman antiquity, a cuſtom of calling the dead party by his name, for eight days ſucceſſively; on the ninth, concluding him paſt all hopes of recovery, they carried him forth, and buried him. See the article BURIAL.

CONCLAVE, the place in which the cardinals of the romiſh church meet, and are ſhut up, in order to the election of a pope.

The conclave is a range of ſmall cells, ten feet ſquare, made of wainſcot: theſe are numbered, and drawn for by lot. They ſtand in a line along the galleries and hall of the Vatican, with a ſmall ſpace between each. Every cell has the arms of the cardinal over it. The conclave is not fixed to any one determinate place, for the conſtitutions of the church allow the cardinals to make choice of ſuch a place for the conclave as they think moſt convenient; yet it is generally held in the Vatican.

The conclave is very ſtrictly guarded by troops: neither the cardinals, nor any perſon ſhut up in the conclave, are ſpoke to, but at the hours allowed of, and then in italian or latin; even the proviſions for the conclave are examined, that no letters be conveyed by that means from the miniſters of foreign powers, or other perſons who may have an intereſt in the election of the pontiff.

CONCLAVE is alſo uſed for the aſſembly, or meeting, of the cardinals ſhut up, for the election of a pope.

After this aſſembly has continued three days, they are only allowed one diſh for one meal, and after five days, only bread and water: but this rule is not over-religiouſly obſerved.

CONCLUSION, in logic, the conſequence or

or judgment, drawn from what was aſſerted in the premiſes; or the previous judgments in reaſoning, gained from combining the extreme ideas between themſelves. See the article SYLLOGISM.

The concluſion of an argument contains two parts, the conſequent, which is the matter of it; and the conſequence, which is its form, and which, of a ſimple abſolute propoſition, renders the concluſion relative to the premiſes whence it was drawn. The queſtion and the concluſion, ſay the ſchoolmen, are the ſame ideas, only conſidered in different views or relations. In the queſtion they are conſidered as doubtful, in the concluſion as void of doubt.

CONCLUSION, in rhetoric, conſiſts of two parts, the recapitulation, or enumeration, and the paſſions.

The recapitulation conſiſts in a repetition of the principal arguments. See the article RECAPITULATION.

CONCLUSION, in law, is where a perſon, by his own act upon record, has charged himſelf with a duty or thing, or confeſſed any matter, whereby he ſhall be concluded; as where a ſheriff returns on a capias, that he has taken the body, and has it not in the court at the day of the return of the writ; the ſheriff by this return is concluded from a plea of eſcape.

CONCOCTION, in medicine, the change which the food undergoes in the ſtomach, *&c.* to become chyle. See CHYLE, CHYLIFICATION, and DIGESTION.

The firſt concoction is made in the ſtomach, by a kind of ferment, as ſeveral ſuppoſe, which partly remains there from the relics of the former meats, and partly flows thither from the cœliac arteries. The ſecond is made in the guts, by the gall and pancreatic juice. The third is in the glandulæ of the meſentery, from the lympha, or water which mixes with the chyle. The fourth is in the lungs, from the mixture of the air in ſome meaſure with the blood there. The fifth is in the veſſels and bowels, as in the ſpleen, liver, teſticles, *&c.*

Theſe five are accounted the ſeveral concoctions in the body, with regard to the preſervation of the individual, and the propagation of the ſpecies. They are more particularly called, the firſt, chyloſis, for chyle; the ſecond, chymoſis, for chyme; the third hæmatoſis, for blood; the fourth, pneumatoſis, for air, and the fifth, ſpermatoſis, for ſeed.

CONCOMITANT, in theology, ſomething that accompanies or goes along with another; as concomitant grace is that which God affords us, during the courſe of our actions, to enable us to perform them; and, according to the romiſh divines, to render them meritorious.

CONCOMITANT NECESSITY. See the article NECESSITY.

CONCORD, in grammar, that part of conſtruction, or ſyntax, in which the words of a ſentence agree; that is, in which nouns are put in the ſame gender, number and caſe; and verbs in the ſame number and perſon with nouns and pronouns. Generally in every language the rules of concord are the ſame, as being almoſt every where of the ſame nature, for the better diſtinguiſhing of diſcourſe: thus, from the diſtinction of two numbers, namely, the ſingular and the plural, the adjective muſt be made to agree with the ſubſtantive accordingly; that is, the former is to be put in this or that number, as the latter is: for the ſubſtantive being what is confuſedly, tho' directly marked by the adjective, ſhould the ſubſtantive denote ſeveral, there are ſeveral ſubjects of that form ſignified by the adjective, and conſequently this ſhould be in the plural number, as *viri fortes*, &c. Again, as there is a diſtinction of maſculine and feminine in moſt languages, there hence ariſes a neceſſity of putting the ſubſtantive and adjective in the ſame gender; and, in like manner, verbs ſhould agree in number and perſon with nouns and pronouns: but ſhould any thing, in writing or diſcourſe, be apparently contrary to thoſe rules above-mentioned, this is by ſome figure or other in grammar, whereby ſomething is implied, or the ideas themſelves are conſidered more than the words that repreſent them.

CONCORD, in common law, the agreement between parties, who intend to levy a fine of lands to one another, how and in what manner they ſhall paſs.

CONCORD is alſo an agreement made between two or more, upon a treſpaſs committed; and is divided into concord executory, and concord executed; the firſt of which, according to ſome opinions, does not bind, as being imperfect; but the latter, being abſolute, binds the party.

CONCORD, in muſic, the relation of two ſounds that are always agreeable to the ear, whether applied in ſucceſſion or conſonance. If two ſimple ſounds be in ſuch a relation, or have ſuch a difference of tune, as that, being ſounded together, they make a mixture or compound ſound, which

which affects the ear with pleaſure, that relation is called concord; and whatever ſounds make an agreeable compound in conſonance, the ſame will always be pleaſing in ſucceſſion, or will follow each other agreeably. The reverſe of concords are what we call diſcords, which is a denomination of all the relations or differences of tune, that have diſpleaſing effects. See the article DISCORD.

Concord and harmony are, in fact, the ſame thing, though cuſtom has applied them differently; as concord expreſſes the agreeable effects of two ſounds in conſonance, ſo harmony expreſſes the agreement of a greater number of ſounds in conſonance.

Uniſonance being the relation of equality between the tune of two ſounds, all uniſons are concords in the firſt degree; but an interval being a difference of tune, or a relation of inequality between two ſounds, becomes a concord or diſcord, according to the different circumſtances of that relation.

The differences of tune take their riſe from the different proportions of the vibrations of a ſonorous body; that is, from the velocity of thoſe vibrations in their recourſes: the more frequent theſe recourſes are, the more acute is the tune, and *vice verſa*. But the eſſential difference between concord and diſcord lies more remote. There does not appear any natural aptitude in two ſounds of a concord, to give a pleaſing ſenſation, more than in two of a diſcord; theſe different effects muſt be reſolved into the divine will.

We know from experience, what proportions of tunes are pleaſing, and what not; and we know likewiſe how to expreſs the difference of tune by the proportion of numbers. We know what is pleaſing, though we do not know why; for inſtance, we know that the ratios of 1:2 conſtitutes a concord, and 6:7 a diſcord; but on what original ſyſtem, pleaſing or diſpleaſing ideas are connected with thoſe relations, and their proper influence upon one another, is entirely above our reach.

We know that the following ratios of the length of chords, are concord, *viz.* 2:1, 3:2, 4:3, 5:4, 6:5, 5:3, 8:5; that is, by taking any chord for a fundamental, repreſented by 1, the following diviſions thereof will be all concords with the whole, as $\frac{1\ 2\ 3\ 4\ 5\ 3\ 5}{2.3.4.5.6.5.8}$; ſo that the characteriſtic of concords and diſcords muſt be looked for in theſe numbers expreſſing the intervals of ſound, not abſtractedly, but as exhibiting theſe numbers of vibrations.

The nearer the vibrations of any two ſtrings approach to a coincidence as frequent as poſſible, the nearer they ſhould approach to that condition, and conſequently the agreement of uniſons (which are in the firſt degree of concord, or have the moſt perfect agreement in tune) as is confirmed from experience. If we take the natural ſeries 1, 2, 3, 4, 5, 6, and compare each number to the next, as expreſſing the number of vibrations of two chords, in the ſame time, whoſe lengths are reciprocally as thoſe numbers, the rule will be found exact; for 1:2 is beſt, then 2:3; after 6 the conſonance is inſufferable, as the coincidences are too rare; though there are no other ratios that are agreeable, beſides thoſe found in that continued order, namely, 3:5 and 5:8, which, with the preceding five, are all the concording intervals within, or leſs than an octave, or 1:2, that is, whoſe acuteſt term is greater than half the fundamental. On this principle 3:5 will be preferable to 4:5, becauſe being equal in the number of vibrations of the acuter term, there is an advantage on the ſide of the fundamental, in the ratio 3:5, where the coincidence is made at every third vibration of the fundamental; and every fifth of the acute term. In like manner, the ratio 5:8 is leſs perfect than 5:6, becauſe though the vibrations of each fundamental, that go to one coincidence, are equal, yet in the ratio 5:6, the coincidence is at every ſixth of the acute term, and only at every eighth in the other.

Thus we have a rule for judging of the preference of concords from the coincidence of their vibrations, as in the following table.

Ratios or Vibrations.				Coincid.
	Grave Term.		Acute Term.	
Uniſon	1	:	1	
Octave, 8ve	2	:	1	60
Fifth, 5th	3	:	2	30
Fourth, 4th	4	:	3	20
Sixth, greater	5	:	3	20
Third, greater	5	:	4	15
Third, leſſer	6	:	5	12
Sixth, leſſer	8	:	5	12
	Grave Lengths.		Acute	

Mr.

Mr. Carre, in the Memoirs of the Royal Academy of Paris, lays down a general propoſition to determine the proportion of cylinders that are to form the concords of muſic, namely, that the ſolid cylinders, whoſe ſounds produce thoſe concords, are in a triplicate and inverſe ratio of that of the numbers, which denote the ſame concords.

Concords are divided into original or ſimple, and compound. An original or ſimple concord is that whoſe extremes are leſs remote than the ſum of any other two concords. A compound concord is equal to two or more concords.

Other muſical writers ſtate the diviſion thus: an octave 1 : 2, and all the inferior concords above expreſſed, are ſimple ones; and all greater than an octave, are compound concords, as being compoſed of and equal to the ſum of one or more octaves, and ſome ſingle concord leſs than an octave; and are uſually, in practice called from that ſimple concords.

As to the compoſition and relations of original concords, by applying to them the rules of addition and ſubtraction of intervals, they will be divided into ſimple and compound, according to the firſt and and more general notion; as in the following table.

Simple concords.	Compound concords		Octave compoſed.
5 : 6 a 3d leſs.	5th.	3d gr. and 3d leſs.	of 5th. 4th. or 6th. gr. 3d leſs, or 3d gr. 3d leſs. 4th.
4 : 5 a 3d gr.	6th leſs.	4th and 3d leſs.	
3 : 4 a 4th.	6th gr.	4th and 3d gr.	

The octave is not only the firſt concord in point of perfection, the agreement of whoſe extremes is greateſt, and the neareſt to uniſon, ſo that when ſounded together, it is impoſſible to perceive two different ſounds; but it is likewiſe the greateſt interval of the ſeven original concords, and, as ſuch, contains all the leſſer, which derive their ſweetneſs from it, as they more or leſs directly riſe out of it, and which gradually decreaſe from the octave to the leſſer ſixth, having but a ſmall degree of concord.

The manner in which theſe concords are found in the octave, ſhews their mutual dependencies: for taking an harmonical and arithmetical mean between each extreme and the moſt diſtant of the two means laſt found; to wit, betwixt the leſſer extreme and the firſt arithmetical mean, and betwixt the greater extreme and the firſt harmonical mean, we have the leſſer concords. Thus, if betwixt 360 and 180, the extremes of the octave, you take an arithmetical mean, it is 270, and an harmonical mean is 240. Then betwixt 360, the greateſt extreme, and 240, the harmonical mean, take an arithmetical mean, it is 300; and an harmonical mean is 288. Again, between 180, the leſſer extreme of the octave, and 270, the firſt arithmetical mean, it is 225, and an harmonical one 216.

Thus we have a ſeries of all the concords, both aſcending towards acuteneſs, from a common fundamental 360; and deſcending towards gravity, from a common acute term 180: which ſeries has this property, that taking the two extremes, and any other two at equal diſtances, the four will be in a geometrical proportion.

The octave, by immediate diviſion, becomes a fourth and fifth; the fifth, again, by immediate diviſion, produces the two thirds; the two thirds are therefore found by diviſion, tho' not immediately, and the ſame is true of the two ſixths. Thus all the original concords ariſe from the diviſion of the octave; the fifths and fourths immediately, the thirds and ſixths mediately. From the perfection of the octave, it may be doubled, tripled, &c. and yet preſerve a concord; that is, the ſum of two or more octaves is concord, tho' the more compound will be gradually leſs agreeable: but it is not ſo with any other concord leſs than an octave, the doubles, &c. whereof are all diſcords.

Again, whatever ſound is concord to one extreme of the octave, is concord to the other alſo; and, if you add any other ſimple concord to an octave, it agrees to both its extremes; to the neareſt, being a ſimple concord, and to the fartheſt a compound one.

The greateſt number of the vibrations of the fundamental, it is to be further obſerved, cannot exceed five, or there is no concord where the fundamental makes more than five vibrations to one coincidence of the acute term.

CONCORDANCE, a ſort of dictionary of the bible, explaining the words thereof in alphabetical order, with the ſeveral books, chapters

chapters, and verſes quoted, in which they are contained.

Cardinal Hugo, who lived in the thirteenth century, is ſaid to be the firſt author of thoſe concordances. Frithemius ſays, that, during the council of Baſil, John of Raguſa, and afterwards Walter the Scotſman, and laſt of all John of Segovia, finiſhed the work of concordances, and put them into the condition wherein we now ſee them finiſhed. We forbear to mention the concordances publiſhed in ſeveral languages, they being almoſt numberleſs.

CONCORDANT VERSES, are ſuch as have ſeveral words in common, but which, by the addition of other words, convey an oppoſite or at leaſt a very different meaning; as,

Et { *canis* / *lupus* } *in ſylva* { *venatur* / *nutritur* } *& omnia* { *ſervat.* / *vaſtat.* }

CONCORDAT, in the canon law, a covenant or agreement in ſome beneficiary matter, as relating to a reſignation, permutation, or other eccleſiaſtical cauſe.

This word is uſed, abſolutely, among the French for an agreement between pope Leo I. and Francis I. of France, for regulating the manner of nominating to benefices.

CONCORDAT GERMANIC, is that made between pope Nicholas V. and the emperor Frederic III. and the princes of Germany relating to beneficiary matters.

CONCORDAT alſo ſerves inſtead of the pragmatic ſanction, which had been abrogated; or rather it is the pragmatic ſanction, ſoftened and reformed.

CONCORDIA, in geography, a town of the dutchy of Mantua, in Italy, about fifteen miles ſouth eaſt of the city of Mantua: eaſt longitude 11° 20′, and north latitude 45°.

CONCOURSE, or CONCURRENCE, the reciprocal action of various perſons or things, co-operating towards the ſame effect.

Thus ſome hold that the concourſe, or concurrence of the ſun and ſtars, are neceſſary for the production of all ſublunary things; and moſt divines maintain, that the actions and operations of all creatures, are continually dependent on the immediate concurrence of the divine mind, who concurs to give ſecond cauſes their efficacy, which without his influence they are deſtitute of. See the article CAUSE.

Concurrence is, by ſchoolmen, diſtinguiſhed into two kinds, *viz.* mediate, which conſiſts in giving a power or faculty to act; and immediate, which is a contemporary influence of the cauſe, along with another, to produce an effect: thus the grandfather concurs mediately to the production of a grandſon, but the father concurs immediately with the mother, to the production of the ſame child.

Point of CONCOURSE. See FOCUS.

CONCRETE, in the ſchool-philoſophy, an aſſemblage or compound. See the article COMPOUND.

CONCRETE, in natural philoſophy and chemiſtry, ſignifies a body made up of different principles, or any mixed body: thus ſoap is a factitious concrete, or a body mixed together by art; and antimony is a natural concrete, or a mixed body, compounded in the bowels of the earth.

CONCRETE, in logic, is uſed in contradiſtinction to abſtract; for example, when we conſider any quality, as whiteneſs, inhering in any ſubject, as, ſuppoſe, in ſnow; if we may ſay the ſnow is white, then we ſpeak of whiteneſs in the concrete: but if we conſider whiteneſs by itſelf, as a quality that may be in paper, in ivory, and in other things, as well as in ſnow, we are then ſaid to conſider, or to take it in the abſtract. See the article ABSTRACT.

CONCRETE NUMBERS, are thoſe which are applied to expreſs or denote any particular ſubject, as two men, three pounds, two thirds of a ſhilling, *&c.* whereas if nothing be concreted with the number, it is taken abſtractly, or univerſally. Thus, three ſignifies an aggregate of three unites; let theſe unites be men, pounds, or whatever elſe you pleaſe.

CONCRETION, the uniting together ſeveral ſmall particles of a natural body into ſenſible maſſes, or concretes, whereby it becomes ſo and ſo figured and determined, and is indued with ſuch and ſuch properties. See CONCRETE.

CONCRETION is alſo the act whereby ſoft bodies are rendered hard; or an inſenſible motion of the particles of a fluid, or ſoft body, whereby they come to a conſiſtence. It is indifferently uſed for induration, condenſation, congelation, and coagulation.

CONCUBINAGE, denotes ſometimes a criminal or prohibited commerce between the ſexes; in which ſenſe it comprehends adultery, inceſt, and ſimple fornication: but, in a more limited ſenſe, it ſignifies the

the cohabitation of a man and a woman in the way of marriage, without having paſſed the ceremony thereof.

However concubinage might be diſpenſed with among the Jews, Turks, and Heathens; among Chriſtians, if polygamy be prohibited, this practice muſt be prohibited too; and yet it is obſervable, that the clergy in this kingdom, and other parts of Chriſtendom, who ſubmitted to the juriſdiction of the pope, were for ſome time indulged in keeping concubines, tho' they were abſolutely prohibited to marry; and when the clergy of England were reſtrained from both, by the 31ſt Henry VIII. c. 14. it was made much more penal to keep a wife than a concubine; for the former was felony, without benefit of clergy, when, by the latter, the prieſt only incurred the loſs of his goods and preferments.

CONCUBINAGE is alſo uſed for a marriage performed with leſs ceremony than is the uſual practice; or a marriage with a woman of inferior condition, to whom the huſband does not communicate his rank or quality.

The antient laws allowed a man to eſpouſe, under the denomination of concubines, certain perſons eſteemed inferior to him; which ſtate of the concubines, though beneath marriage, was yet accounted a reputable one: the commerce was eſteemed lawful, and the concubine might be puniſhed for adultery, in like manner as the wife. This kind of concubinage is ſtill practiſed in ſome countries, particularly in Germany, under the title of half marriage, by which the parties are bound for ever. See the article MARRIAGE.

CONCUBINE, a woman whom a man takes to cohabit with in the manner of a wife, without being authoriſed thereto by a legal marriage.

CONCUBINE is alſo uſed for a legitimate, and only wife. See CONCUBINAGE.

Among the Romans, inheritances deſcended to children ſprung from ſuch concubines. Concubines, among the Greeks, were uſually women taken captive, or bought with money, and were always inferior to lawful wives, whoſe dowery or parentage gave them the preheminence. It appears, that among the Jews, a concubine had not only oftentimes the ſame appellation, but, in the moſt important inſtances, was upon the ſame level with a wife: nor does there ſeem to be any difference made between the ſons of the wife and the concubine. The Turks ſtill make ſo little diſtinction between a wife and a concubine, that whoever firſt has a ſon, ſuch ſon is entitled to all privileges and advantages of an eldeſt ſon.

CONCUPISCENCE, according to divines, an irregular appetite, or luſt after carnal things, inherent in the nature of man ever ſince the fall.

Concupiſcence, according to Malebranche, is a natural effort made by the traces of the brain on the mind, in order to attach it to ſenſible things: the origin of concupiſcence he aſcribes to thoſe impreſſions made on the brain of our firſt parents at their fall, which are ſtill tranſplanted and continued to thoſe of their children; and he aſcribes the dominion or prevalence of concupiſcence to original ſin.

CONCURRENCE, or CONCOURSE. See the article CONCOURSE.

CONCURRING, or CONGRUENT FIGURES, in geometry, thoſe which being laid upon one another, exactly correſpond and cover each other, and therefore are equal.

COND, CON, or CONN, in the ſea-language, to guide or direct the ſhip to her right courſe, by giving directions to the man at the helm how to ſteer. See the article STEERING.

The man that cons the ſhip directs him at the helm in theſe terms: *ſtarboard, or port the helm*; that is, put the helm to the right or left of the ſhip, and then the ſhip will go to the larboard or ſtarboard; for the ſhip always ſails contrary to the helm. *Right the helm, or helm a midſhip*; that is, keep it right up, or in the midſhips, when it is required the ſhip ſhould go right before the wind. *Eaſe the helm, no near, bear up*; that is, let her fall to leeward, or ſail more large, or more before the wind. *Steady as you go*; that is, keep her upon the ſame point. *Keep thus! thus!* that is, let her go juſt as ſhe is. Other directions, much to the ſame purpoſe, importing chiefly to keep the ſhip near the wind, are, *aloof, keep your looſ, fall not off, veer no more, keep her to, touch the wind, have a care of the lee latch.*

CONDE, a town of the french Netherlands, in the province of Hainault, ſituated on the river Scheld, about twelve miles weſt of Mons: eaſt long. 3° 40′, and north lat. 50° 35′.

CONDECEDO, or *Cape* CONDECEDO, a pro-

promontory of north America, in the province of Jucatan, about 100 miles weſt of Merida: weſt long. 93°, and north lat. 21°.

CONDEMNATION, the act of giving judgment, paſſing or pronouncing ſentence againſt a perſon, ſubjected thereby to ſome penalty or puniſhment, either in reſpect of life, reputation, or fortune. See SENTENCE and PUNISHMENT.

CONDENSATION, the act whereby a body is rendered more denſe, compact, and heavy.

Hence condenſation ſtands oppoſed to dilatation, or rarefaction; which latter renders the body lighter and looſer, by ſetting the parts further aſunder; whereas the former brings them cloſer to each other, and increaſes their contact.

Condenſation is, by moſt writers, diſtinguiſhed from compreſſion, in regard the latter is performed by ſome external violence, whereas the former is the action of cold. See COLD and COMPRESSION.

There has been no body yet found, however denſe and compact, but cold renders ſtill denſer, not even excepting diamonds, the hardeſt of all known bodies; and as the degree of cold increaſes, this contraction is alſo increaſed: the former contraction ſtill decreaſing, as the cold is leſs.

Water alone ſeems to expand by cold, inſomuch that, when congealed, the ice takes up more ſpace than the water did before: but this is attributed to the intromiſſion of ſome foreign matter, ſuch as the particles of the ambient air, rather than to any proper expanſion of the water, by the action of cold.

If air be condenſed upon water in a bottle, it will cauſe it to ſpout through the tube of communication to a very great height, *viz.* 30 feet, if only one atmoſphere be injected, 60 if two, and ſo on.

A bladder that will ſuſtain the ſpring of common air, will be broke by condenſed air. See the next article.

CONDENSER, a pneumatic engine, or ſyringe, whereby an uncommon quantity of air may be crowded into a given ſpace; ſo that ſometimes ten atmoſpheres, or ten times as much air as there is at the ſame time, in the ſame ſpace, without the engine, may be thrown in by means of it, and its egreſs prevented by valves properly diſpoſed. See plate XLII. fig. 8.

It conſiſts of a braſs cylinder, wherein is a moveable piſton; which being drawn out, the air ruſhes into the cylinder thro' a hole provided on purpoſe; and when the piſton is again forced into the cylinder, the air is driven into the receiver through an orifice, furniſhed with a valve to hinder its getting out.

The receiver or veſſel containing the condenſed air, ſhould be made very ſtrong, to bear the force of the air's ſpring thus increaſed; for which reaſon they are generally made of braſs: its orifice is fitted with a female ſcrew to receive the male ſcrew at the end of the condenſer.

If glaſs be uſed for a condenſer, it will not ſuffer ſo great a degree of condenſation; but the experiment will be more entertaining, ſince the ſubject may be viewed in the condenſed air.

CONDERS, a term uſed in the herring fiſhery, for people who ſtand on cliffs or eminences near the ſea-coaſt, to direct the fiſhermen which way the ſhoal of herrings paſſes; their courſe being more conſpicuous to thoſe who ſtand on high cliffs aſhore, than to them on board the veſſels.

CONDITION, in the civil law, a clauſe of obligation ſtipulated as an article of a treaty or contract; or in a donation of teſtament, legacy, *&c.* in which laſt caſe a donee does not loſe his donative, if it be charged with any diſhoneſt or impoſſible conditions.

The conditions under which a donation can be made, are diſtinguiſhed into three kinds, 1. The caſual, which depends merely on chance. 2. The poteſtative, which is abſolutely in our power; and, 3. The mixed condition, which is compounded of the other two.

CONDITION, in common law, a reſtriction annexed to an act, qualifying or ſuſpending the ſame, in rendering its effect precarious and uncertain.

There are various kinds of conditions, *viz.* condition in deed, condition precedent and ſubſequent, condition in law, *&c.*

CONDITION *in deed*, the bridle annexed to a feofment, leaſe, or grant, either in writing or without.

CONDITION *precedent* gains the thing, or eſtate made upon condition, by the performance of it.

CONDITION *ſubſequent* keeps and continues the thing, made upon condition, by the performance of it.

CONDITION *in law*, or CONDITION *implied*, is when a perſon grants an office to another, as keeper of a park for life; tho' there be no condition expreſſed in the grant, yet the law makes one covertly, which is, that if the grantee does not

execute all things belonging to his office, it ſhall be lawful for the granter to diſcharge him.

CONDITIONAL, ſomething not abſolute but ſubject to conditions. See the preceding article.

Conditional legacies are not due till the conditions are accompliſhed.

CONDITIONAL CONJUNCTIONS, in grammar, are thoſe which ſerve to make propoſitions conditional. As, *if*, *unleſs*, *provided*, &c.

CONDITIONAL PROPOSITIONS, in logic, ſuch as conſiſt of two parts connected together by a conditional particle.

CONDITIONAL SYLLOGISM, a ſyllogiſm where the major is a conditional propoſition. Thus,

If there is a God, he ought to be worſhipped.

But there is a God;

Therefore he ought to be worſhipped.

The arminian divines maintain, that all the decrees of God relating to the ſalvation and damnation of man, are truly conditional; and the calviniſts, that they are abſolute.

Science of conditionals, that is, of conditional truths, is the knowledge which God has of things conſidered not according to their eſſence, their nature, or their real exiſtence, but under a certain ſuppoſition which imports a condition never to be accompliſhed.

CONDOM, the capital of the Condomois, in the province of Gaſcony, in France, about ſixty miles ſouth-eaſt of Bourdeaux. It is a biſhop's ſee, ſituated in 20′ eaſt longitude, and 44° 5′ north latitude.

CONDORE or PULO CONDORE, a little iſland in the indian ocean, about ſixty miles ſouth of Cochin China: eaſt longitude 106° 30′, and north lat. 9° 30′.

CONDORMIENTES, in church hiſtory, religious ſectaries, who hold their name from lying altogether, men and women, young and old. They aroſe in the thirteenth century near Cologne, where they are ſaid to have worſhiped an image of Lucifer, and to have received anſwers and oracles from him.

Another ſpecies of condormientes, were a branch of anabaptiſts in the ſixteenth century; ſo called, becauſe they lay ſeveral of both ſexes in the ſame chamber on pretence of evangelical charity.

CONDUCT, or *ſafe* CONDUCT, a deed or ſecurity granted to an enemy, under the great ſeal of a prince, that he may paſs and repaſs without being moleſted.

CONDUCTOR, in ſurgery, an inſtrument which ſerves to conduct the knife in the operation of cutting for the ſtone, and in laying open ſinuſes and fiſtulas. It is alſo called a gorget. See the article STONE.

CONDUCTORS, in military affairs, are aſſiſtants given to the commiſſary of the ſtores to receive or deliver out ſtores to the army, to attend at the magazines by turns when in garriſon, and to look after the ammunition waggons in the field. They bring their accounts every night to the commiſſary, and are immediately under his command.

CONDUCTOS AD PROFICISCENDUM. See CAPIAS CONDUCTOS, &c.

CONDUIT, a canal or pipe for the conveyance of water, or other fluid.

There are ſeveral ſubterraneous conduits through which the waters paſs that form ſprings. Artificial conduits for water are made of lead, ſtone, caſt-iron, potters earth, timber, &c. See PIPE.

Conduits for conveying away the ſuillage of a houſe, Sir H. Wotton ſays, ſhould be placed in the moſt remote and loweſt part of the foundation, with ſecret vents paſſing up through the wall like a funnel, to the wide air, which all italian artiſts commend for the diſcharge of noiſome vapours.

CONDYLOMA, or CONDYLUS, in anatomy. See the article CONDYLUS.

CONDYLOMA, in medicine, a tubercle or callous eminence which ariſes in the folds of the anus, or rather a ſwelling or hardning of the wrinkles of that part.

Condylomata proceed from a redundant and vitiated blood ſtagnating in the hæmorrhoidal veſſels, and are often the effect of venereal ailments. Their cure depends on mercurial unctions, and proper eſcharotics to conſume them; though extirpation either by ligature or inciſion, if the nature of the part will admit, is the moſt expeditious. It very often happens that a ſalivation is neceſſary, in order to facilitate and complete the cure.

CONDYLUS, a name given by anatomiſts to a knot in any of the joints formed by the epiphyſis of a bone. In the fingers it is called a knuckle.

CONDYLUS, in botany, ſignifies the joints of plants.

CONE, in geometry, a ſolid figure, having a circle for its baſe, and its top terminated in a point or vertex.

A cone may be conceived to be generated in the following manner. Take an immoveable point A (plate XLIX. fig. 5, N°. 1.)

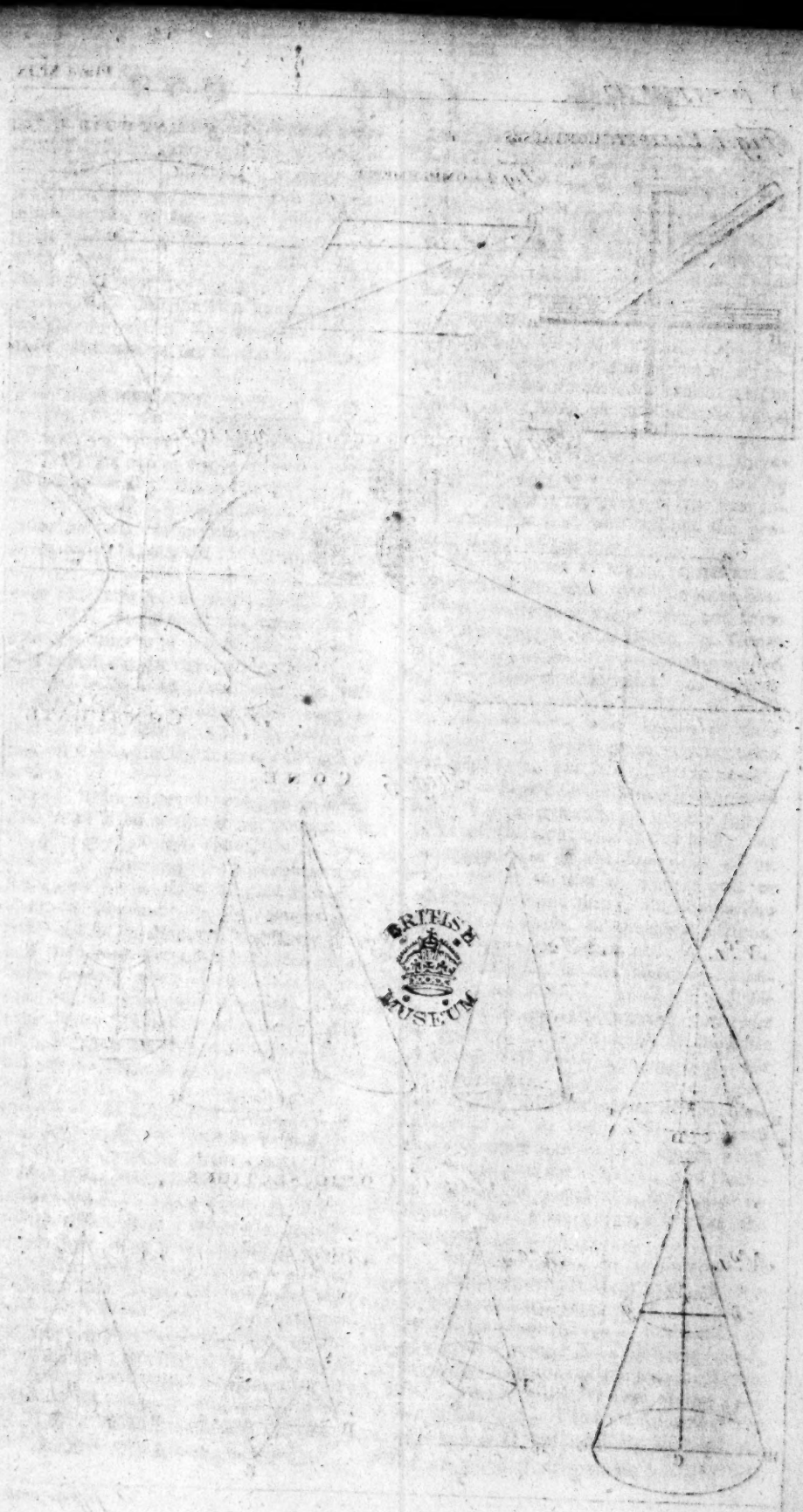

BRITISH MUSEUM

Fig. 1. ELLIPTIC COMPASSES.

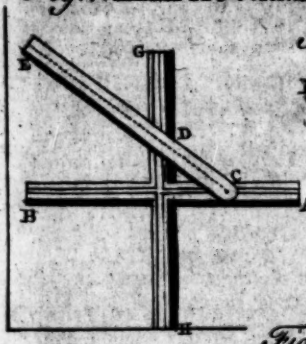


Fig. 2. COMPLEMENT.

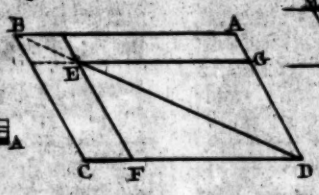


Fig. 3. CONCHOID.

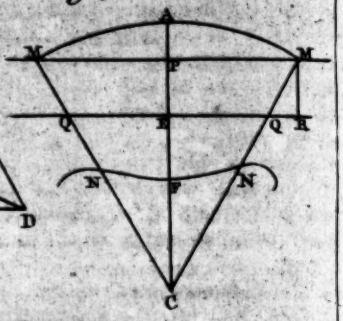
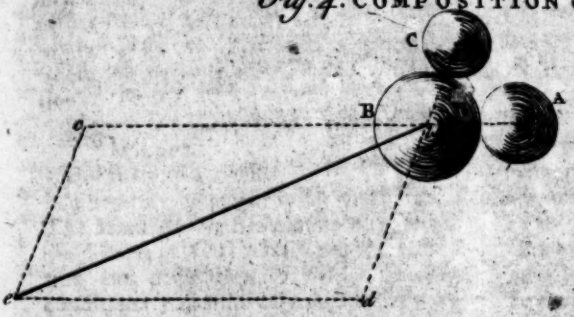


Fig. 4. COMPOSITION of MOTION.



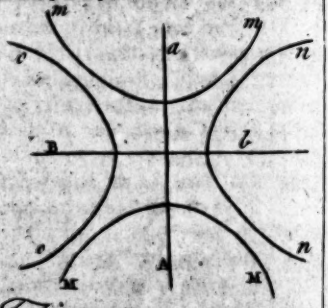


Fig. 7. CONJUGATE.

Fig. 5. CONE.

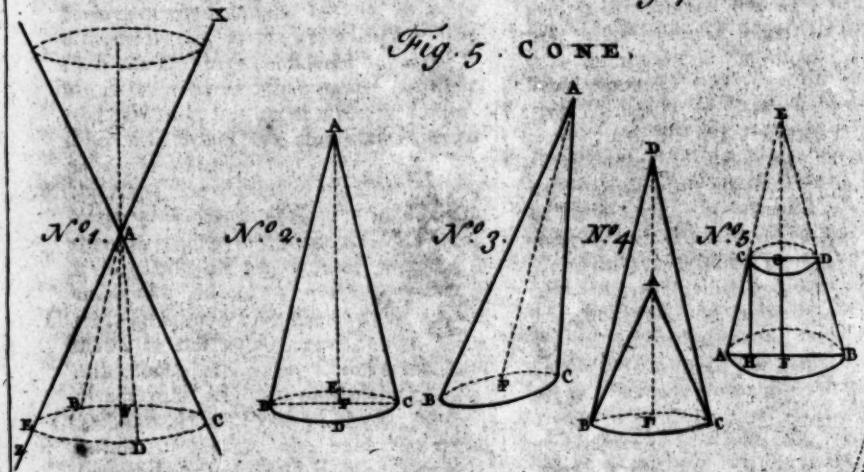
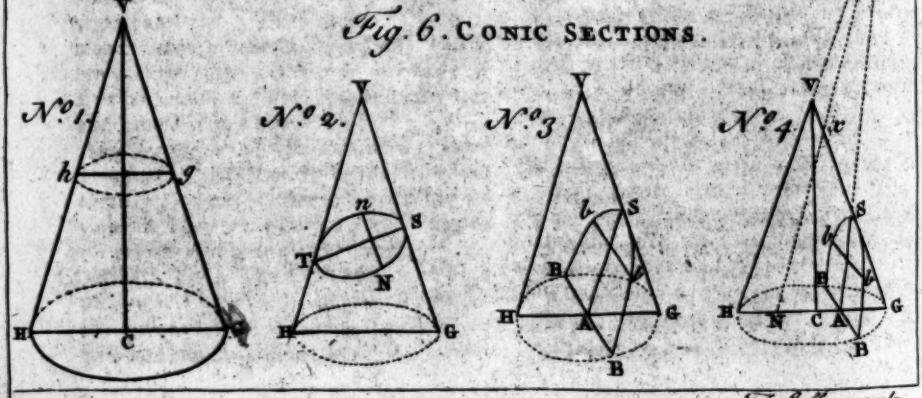


Fig. 6. CONIC SECTIONS.



T. Jefferys sculp.

N°. 1.) elevated above the plane of a circle BCDE, and ſuppoſe a ſtraight line XZ drawn through the point and extended both ways from it to an indefinite length, to be carried quite round the circle, all the while touching its circumference, and continuing ſtill fixed to the immoveable point; the line by this motion will deſcribe two conic ſurfaces, which are vertical or oppoſite, having their common vertex at the immoveable point.

The ſolid contained within this conic ſurface, between the immoveable point A and the circumference of the circle BCDE, is a cone: the immoveable point A is the vertex, the circle BCDE is the baſe: and a ſtraight line AF drawn from the vertex to the center of the baſe, is the axis of the cone: all ſtraight lines drawn from the vertex to the circumference of the baſe, as AB, AC, AD, AE, &c. are ſides of the cone. If the axis of a cone be perpendicular to its baſe, it is called a right cone, as in N°. 2. if the axis be inclined to the baſe, it is called a ſcalinous or oblique cone, ſuch as that in n°. 3, and a right cone is always underſtood, when the contrary is not expreſſed.

Euclid, in his eleventh book, gives a definition of a cone that is not general, it being only of a right cone; for he ſays, a cone is produced by the revolution of the plane of a right angled triangle, about the perpendicular leg remaining at reſt. If this leg or axis be greater than half the baſe, the ſolid produced is an acute angled cone; if leſs, it is an obtuſe angled cone; and if equal, a right angled cone. Thus the cone BAC (*ibid.* n°. 4.) is leſs acute than the cone BDC, becauſe the angle BDF, is leſs than the angle BAF.

Properties of the CONE. 1. Cones and pyramids having the ſame baſes and altitudes are equal to each other. It is ſhewn, that every triangular priſm may be divided into three equal pyramids, and therefore that a triangular pyramid is one third of a priſm ſtanding on the ſame baſe, and having the ſame altitude. Hence, ſince every multangular body may be reſolved into triangular ones, every pyramid is the third part of a priſm, ſtanding upon the ſame baſe, and having the ſame altitude; and as a cone may be eſteemed an infinite angular pyramid, and a cylinder an infinite angular priſm, a cone is a third part of a cylinder which has the ſame baſe and altitude. Hence we have a method of meaſuring the ſolidity and ſurface of a cone and pyramid. Thus, find the ſolidity of a priſm or cylinder, having the ſame baſe with the cone or pyramid, which found divide by 3, the quotient will be the ſolidity of the cone or pyramid. Or the ſolidity of any cone is equal to the area of the baſe multiplied into one third part of its altitude. As for the ſurfaces, that of a right cone, not taking in the baſe, is equal to a triangle whoſe baſe is the periphery and altitude the ſide of the cone; therefore the ſurface of a right cone is had by multiplying the periphery of the baſe into half of the ſide, and adding the product to that of the baſe.

2. The altitudes of ſimilar cones are as the radii of the baſes, and the axes likewiſe are as the radii of the baſes, and form the ſame ang'e with them. 3. Cones are to one another in a ratio compounded of their baſes and altitudes. 4. Similar cones are in a triplicate ratio of their homologous ſides, and likewiſe of their altitudes. 5. Of all cones ſtanding upon the ſame baſe, and having the ſame altitude, the ſuperficies of that which is moſt oblique is the greateſt, and ſo the ſuperficies of the right cone is the leaſt; but the proportion of the ſuperficies of an oblique cone to that of a right one, or which is the ſame thing, the compariſon thereof to a circle, or the conic ſections, has not yet been determined.

To meaſure the ſurface and ſolidity of a truncated CONE ABCD, (*ibid.* n°. 5.) *the altitude* CH *and the diameters of its baſes being given.* The diameters of the baſes AB and CD being known, find their circumferences. To the ſquare of the altitude CH, add the ſquare of the ſame difference of the radii AH, and from the aggregate extract the ſquare root, which will give the ſide AC, and the ſemi ſum of the peripheries, multiplied by the ſide AC gives the ſuperficies of the truncated cone.

For the ſolidity, ſay, As the difference of the ſemidiameters, AH, is to the altitude of the truncated cone, CH, ſo is the greater ſemidiameter, AF, to the altitude of the intire cone, FE. This being found, ſubtract the altitude of the truncated cone GF, which will leave that of the cone taken off, GE. Find the ſolidity of the cones CED and AEB; ſubtract the former

former from the latter, and the remainder will be the ſolidity of the truncated cone ACDB.

For the ſections of the cone, ſee the article CONIC SECTION.

Center of gravity and oſcillation of a cone. See the article CENTER.

CONES of the higher kinds, thoſe whoſe baſes and ſections parallel to the baſes, are circles of the higher kinds. They are generated by ſuppoſing a right line fixed in a point, on high, but conceived to be capable of being extended more or leſs on occaſion, and moved round the periphery of a circle. See the article CIRCLE.

CONE of rays, in optics, includes all the ſeveral rays which fall from any radiant point on the ſurface of a glaſs. See the article RAY.

CONE and KEY, among the antient Saxons, was when a woman at the age of 14 or 15, took upon her the charge of her houſe, and received cone and key; ſhe being then held of competent years to keep the accounts and keys of the houſe.

CONESSI, a ſort of bark of a tree which grows on the Cormandel-coaſt, in the Eaſt-Indies. It is recommended in a letter to Mr. Monro, in the Medical Eſſays, as a ſpecific in diarrhœas. It is to be pounded into a fine powder, and made into an electuary with ſyrup of oranges; and the bark ſhould be freſh, and the electuary new made every day, or ſecond day, otherwiſe it loſes its auſtere but grateful bitterneſs on the palate, and its proper effects on the inteſtines.

CONFARREATION, in antiquity, a ceremony obſerved by the Romans in certain nuptial ſolemnities. Ulpian ſays, it conſiſted in the offering up ſome pure wheaten bread, rehearſing at the ſame time a certain formula, in preſence of ten witneſſes. According to Servius, the Pontifex Maximus and Flamen Dialis, joined the man and woman by making them eat of the ſame cake of ſalted bread, Confarreation was the moſt ſacred of the three manners of contracting marriage among the Romans.

CONFECTION, in pharmacy, ſignifies in general any thing prepared with ſugar: in particular it imports ſomething preſerved, eſpecially dry ſubſtances.

CONFECTION alſo ſignifies a liquid or ſoft electuary, of which there are various ſorts directed in diſpenſatories, but thoſe ordered in the London Diſpenſatory are the following. 1. The confection of Hamech, the ingredients of which are polypody, myrobalans, agaric, ſenna, tamarinds, red roſes, manna, colocynth. It is applied as a draſtic in purging the groſſer humours and viſcidities. 2. The cordial confection, which is a ſubſtitute for the operoſe confectio raleighana, compoſed of a tincture drawn with proof ſpirit from the leſſer cardamom ſeeds, zedoary and ſaffron, freſh roſemary tops, and juniper berries, to which is afterwards added the compound powder of crab's claws, cinnamon, nutmeg, cloves and double refined ſugar. 3. The confection, called paulina, conſiſts of coſtus, cinnamon, long pepper, black pepper, ſtrained ſtorax, ſtrained galbanum, ſtrained opium, Ruſſia-caſtor. 4. Confectio Damocratis. See MITHRIDATE. 5. Confectio Fracaſtorii. See the article DIASCORDIUM.

6. Confectio Alkermes. See ALKERMES.

CONFECTOR, in roman antiquity, a ſort of gladiator hired to fight in the amphitheatre againſt beaſts, thence alſo denominated beſtiarius.

According to ſome, the confector did not fight with beaſts like the beſtiarius, but was ſent on purpoſe to diſpatch them whenever they became ſo wild (which was often the caſe) as to threaten the lives of the ſpectators.

CONFECTS, a denomination given to fruits, flowers, herbs, roots, &c. when boiled and prepared with ſugar or honey, to diſpoſe them to keep, and render them more agreeable to the taſte. Solid ſaccharine ſimple confects, are prepared after the following manner. The ſugar being firſt well clarified with pure water and the white of an egg, is boiled to a conſiſtence a little thicker than that of a ſyrup. Then the thing which is to be preſerved is put into a large copper veſſel, flat bottom, placed upon a gentle fire; and when it is moderately heated, together with its contents, the artiſt ſprinkles ſome of the liquid ſugar, before prepared, ſomewhat warm upon the things in the veſſel, juſt enough to moiſten them, and immediately ſtirs them to and fro, ſhakes them, and toſſes the veſſel in ſuch a manner as to prevent the ſeeds, or whatever elſe it may be, from cluſtering together. Then they are to be totally dried by a gentle coal fire under the veſſel. After this, as much diſſolved ſugar is to be added to the thing as is ſufficient to moiſten it moderately, and continuing the agitation, &c. it is to be dried. This operation is to be repeated, moiſtening and drying

the

the materials by turns, till they are ſufficiently covered with ſugar. Confectioners, however, prepare things with greater eaſe, and in order to be able to ſell them at a lower rate, they add ſtarch to the diſſolved ſugar, by which means they not only dry them ſooner, but alſo render them ſufficiently large at a ſmall expence. To make confects red, infuſe ſome red ſaunders in the water, or cochineal, or ſyrup of mulberries. If you would have them green, boil the juice of ſpinage with the ſugar; if yellow, put ſaffron in the water you mix with the ſugar.

Confects are reduced to eight kinds, *viz.* 1. Dry confects. 2. Sugar-plums. 3. Liquid confects, thoſe whoſe fruits, either whole, in pieces, in ſeeds, or in cluſters, are connected in a fluid, tranſparent ſyrup, which takes its colour from that of the fruits boiled in it. 4. Marmalades. 5. Jellies. 6. Paſtes. 7. Conſerves. 8. Candies. See the articles MARMALADE, PASTE, *&c.*

CONFEDERACY, in a general ſenſe, a league or alliance between ſeveral princes and ſtates, to carry on a common cauſe.

CONFEDERACY, in law, is when two or more combine together, to do ſome damage or injury to another, or to commit ſome unlawful action.

Confederacy is puniſhable if nothing be put in execution; but this muſt be declared by ſome matter of proſecution, as entering into bonds or promiſes the one to the other: the confederacy muſt alſo be malicious, and againſt an innocent perſon.

CONFERVA, in botany, a genus of water-plants, of the cryptogamia claſs, and order of moſſes; conſiſting of oblong, capillary filaments, divided into joints of a globular figure.

CONFESSION, in a legal ſenſe, an acknowledgment of ſome truth, though in prejudice of the perſon that makes the declaration. A confeſſion, according to law, muſt never be divided, but always taken intire: nor muſt a criminal be condemned upon his own ſingle confeſſion, without other concurring proofs. A perſon is not admitted to accuſe himſelf, whence a voluntary extrajudicial confeſſion is never allowed of as any proof.

CONFESSION, among divines, the verbal acknowledgment which a chriſtian makes of his ſins.

Among the Jews, it was a cuſtom, on the annual feaſt of expiation, for the high prieſt to make confeſſion of ſins to God in the name of the whole people: beſides this general confeſſion, the Jews were enjoined, if their ſins were a breach of the firſt table of the law, to make confeſſion of them to God: but violations offered the ſecond table were to be acknowledged to their brethren. The confeſſions of the primitive chriſtians were all voluntary, and not impoſed on them by any laws of the church; yet private confeſſion was not only allowed, but encouraged.

The romiſh church requires confeſſion, not only as a duty, but has advanced it to the dignity of a ſacrament: this confeſſion is made to the prieſt, and is private and auricular; and the prieſt is not to reveal them under pain of the higheſt puniſhment.

CONFESSION *of faith*, a liſt of the ſeveral articles of belief in any church, as the Augſburg confeſſion is that of the lutheran church.

CONFESSIONAL, or CONFESSIONARY, a place in churches, under the great altar, where the bodies of deceaſed ſaints, martyrs and confeſſors, were depoſited. This word is alſo uſed by the romaniſts for a deſk in the church where the confeſſor takes the confeſſions of the penitents.

CONFESSO, or PRO-CONFESSO. See the article PRO-CONFESSO.

CONFESSOR, in the romiſh church, a prieſt who is impowered to receive the confeſſion of penitents, and to give them abſolution. See CONFESSION.

In the primitive times, thoſe chriſtians, in general, who had ſuffered for the ſake of their religion; and, in particular, thoſe who had made a public confeſſion of their faith before the heathen magiſtrates, were honoured with the name of confeſſors.

CONFIGURATION, the outward figure which bounds bodies, and gives them their external appearance; being that which, in great meaſure, conſtitutes the ſpecific difference between bodies.

CONFIGURATION *of the planets*, in aſtrology, a certain ſituation of the planets in the zodiac, whereby they are ſuppoſed to aid or oppoſe each other.

CONFIRMATION, in a general ſenſe, the act of ratifying or rendering a title, claim, report, or the like, more ſure and indiſputable.

CONFIRMATION, in law, a conveyance of an eſtate, or right in *eſſe*, from one man

to

to another, whereby a voidable eſtate is made ſure and unavoidable, or a particular eſtate is increaſed, or a poſſeſſion made perfect.

It is alſo the ſtrengthening of an eſtate formerly made, which is avoidable, though not preſently void: as if a biſhop was to grant his chancellorſhip by patent, for term of the patentee's life; this is no void grant, but voidable by the biſhop's death, except it be ſtrengthened by the confirmation of the dean and chapter.

CONFIRMATION, in rhetoric, the third part of an oration, wherein the orator undertakes to prove the truth of the propoſition advanced in his narration; and is either direct or indirect.

Direct, confirms what he has to urge for ſtrengthening his own cauſe. Indirect, properly called confutation, tends to refute the arguments of his adverſaries.

CONFIRMATION, in theology, the ceremony of laying on of hands, for the conveyance of the holy ghoſt.

The antiquity of this ceremony is, by all antient writers, carried as high as the apoſtles, and founded upon their example and practice. In the primitive church, it uſed to be given to chriſtians immediately after baptiſm, if the biſhop happened to be preſent at the ſolemnity. Among the Greeks, and throughout the Eaſt, it ſtill accompanies baptiſm: but the romaniſts make it a diſtinct and independent ſacrament. Seven years is the ſtated time for confirmation: however, they are ſometimes confirmed before, and ſometimes after that age. The perſon to be confirmed has a god-father and god-mother appointed him, as in baptiſm. The order of confirmation in the church of England, does not determine the preciſe age of the perſons to be confirmed.

CONFISCATION, in law, the adjudication of goods or effects to the public treaſury, as the bodies and effects of criminals, traitors, &c. Merchandizes that are prohibited, or brought aboard, or aſhore, without paying the duties when ſeized, are confiſcated.

He who is condemned to loſe his life, muſt alſo loſe his goods: yet the widows of criminals do not loſe their dowries, nor their ſhare in the goods of the community, by the forfeiture of their huſbands. The title to goods, which are not claimed by any other, is given by law to the king.

CONFLAGRATION, the general burning of a city, or other conſiderable place. This word is commonly applied to that grand period or cataſtrophe of our world, when the face of nature is to be changed by a deluge of fire, as formerly it was by that of water.

The ſentiments of authors are various in regard to the cauſe whence the conflagration is to riſe, and the effects it is to produce. Divines will have it take its riſe from a miracle, as a fire from heaven; but philoſophers contend for its being produced from natural cauſes: ſome think an eruption of the central fire ſufficient for the purpoſe; others look for the cauſe in the atmoſphere. The aſtrologers account for it from a conjunction of all the planets in the ſign Cancer, as they ſay the deluge was occaſioned by the conjunction in Capricorn: but others aſſure themſelves that the world is to undergo its conflagration from the near approach of a comet in its return from the ſun; as theſe huge bodies, by the intenſity of their heat, and their wandering tranſverſe motion acroſs the earth's orbit, threaten to produce the moſt ſignal changes and revolutions in the ſyſtem of things. See the article COMET.

CONFLUENCE, or CONFLUX, among geographers, the place where two rivers unite their ſtreams. See RIVER.

CONFLUENT, among phyſicians, &c. an appellation given to that kind of ſmall-pox wherein the puſtules run into each other. See the article POX.

CONFORMATION, the particular conſiſtence and texture of the parts of any body, and their diſpoſition to compoſe a whole.

CONFORMATION, in medicine, that make and conſtruction of the human body, which is peculiar to every individual.

Hence thoſe diſeaſes called *morbi malæ conformationis*, or organical diſeaſes, are thoſe which depend upon the bad conformation of the parts. Theſe, if external, may admit of chirurgical cure; and proper exerciſe, regimen, and medicine, may ſometimes contribute much to the relief even of thoſe which are internal, or, at leaſt, may render them ſupportable.

CONFORMITY, among ſchoolmen, the relation of agreement between one thing and another; as that between any thing and the diviſion thereof, the object and the underſtanding, &c.

CONFRONTATION, the confronting or bringing two or more perſons in preſence of each other, in order to diſcover the truth

truth of ſome fact, whereof they give different accounts.

CONFUSION, in a general ſenſe, is when things prior in nature do not precede, or poſterior do not follow; or a perturbation of order.

CONFUSION, in phyſic, a diſorder of the eyes, that happens when, upon a rupture of the internal membranes which include the humours, they are all confounded together.

CONFUTATION, in rhetoric, making a branch of confirmation, is that part of an oration wherein the orator ſeconds his own arguments, and deſtroys thoſe produced by his antagoniſt. See the article CONFIRMATION.

CONGE', in the french law, a permiſſion granted by a ſuperior to an inferior, freeing him from ſome duty with which, before, he was obliged to conform.

CONGE' *d'lire*, in eccleſiaſtical polity, the king's permiſſion royal to a dean and chapter in the time of a vacancy, to chooſe a biſhop; or to an abbey, or priory, of his own foundation, to chooſe their abbot or prior.

The king of England, as ſovereign patron of all archbiſhoprics, biſhoprics, and other eccleſiaſtical benefices, had of antient time free appointment of all eccleſiaſtical dignities, whenſoever they chanced to be void; inveſting them firſt *per baculum & annulum*, and afterwards by his letters patent; and in courſe of time he made the election over to others, under certain forms and limitations, as that they ſhould, at every vacation, before they chooſe, demand the king's congé d'elire, and after the election, crave his royal aſſent, *&c.*

CONGE', in architecture, a mould in form of a quarter round, or a cavetto, which ſerves to ſeparate two members from one another, ſuch as that which joins the ſhaft of the column to the cincture, called alſo apophyge.

CONGES are alſo rings or ferrels formerly uſed in the extremities of wooden pillars, to keep them from ſplitting, afterwards imitated in ſtone-work.

CONGELATION, freezing, or ſuch a change produced by cold in a fluid body, that it quits its former ſtate, and becomes congealed.

We muſt obſerve, that the word congelation is only applied to homogeneous fluids, ſuch as water, oils, or pingous ſubſtances, and fuſed metals; in which, beſides a concretion in the cold air, no change is obſerved. We muſt alſo obſerve that, by congelation, ſome bodies, ſuch as water, are rarified and expanded; whereas others are condenſed, or rendered more compact, ſuch as fixed metals, and pingous bodies. In the ſhops, the condenſation of any liquor in a cold place, is alſo called congelation. The ſtones produced in ſome caverns, from the drops of petrifying water, are alſo called congelations: for one method in which nature forms ſtones, is by ſuch a congelation as does not ſuffer any thing of an earthly nature to be ſeparated, or precipitated from the whole maſs, either ſpontaneouſly, or by the action of fire; but produces an uniform drineſs and induration of the whole maſs.

CONGER, in zoology, the name of a ſpecies of muræna, with the upper edge of the back-fin black, called in engliſh the ſea-eel. See the article MURÆNA.

The conger reſembles the common eel, but is much larger, being frequently met with five or ſix feet long, and of the thickneſs of a man's thigh. Some give it the name of congrus, and others that of gryllus.

CONGERIES, a collection or aggregate of ſeveral particles, or bodies united into one maſs.

CONGESTION, in medicine, a collection of humours, formed gradually; whereby it differs from defluxion, which is made on a ſudden. See the article DEFLUXION.

CONGIARY, *congiarium*, in roman antiquity, a kind of donative of wine or oil, beſtowed on that people by their emperors, and ſo called from the congius, wherewith it was meaſured out to them. Sometimes, indeed, the congiary was made in money or corn; and the medals ſtruck on ſuch occaſions, are known by the ſame name.

CONGIUS, a liquid meaſure of the antient Romans, containing the eighth part of the amphora, or the fourth of the urna, or ſix ſextarii. The congius in engliſh meaſure contains 207,0676 ſolid inches; that is, ſeven pints, 4,942 ſolid inches.

CONGLOBATE GLAND, in anatomy, a little ſmooth body, wrapt up in a fine ſkin, by which it is ſeparated from all other parts, only admitting an artery and a nerve to paſs in, and giving way to a vein and excretory canal to come out, of which ſort are the glands of the brain and teſtes.

Winſlow includes under the name of conglobate glands, the lymphatic glands alone, and calls all the other glands of the body by the name conglomerate. See the next article.

CONGLOMERATE GLAND, that which is compoſed of ſeveral little conglobate glands, all tied up together in one common tunicle or membrane. Sometimes all their excretory ducts unite, and make one common pipe, through which the liquor of them all runs, as the pancreas and parotides do. Sometimes the ducts uniting, form ſeveral pipes, which only communicate with one another by croſs canals; and ſuch are the mammæ: others again have ſeveral pipes without any communication with one another; of which ſort are the glandulæ lachrymales, and proſtatæ: and a fourth ſort, is when each little gland has its own excretory duct, through which it tranſmits its liquor to a common baſon, as the kidnies.

CONGLUTINATION, the gluing or faſtening any two bodies together by the intromiſſion of a third, whoſe parts are unctuous and tenacious, in the nature of glue. See the article GLUE.

Thus, in the animal œconomy, the parts of the body are ſaid to be conglutinated by means of their natural moiſture.

CONGO, a large country on the weſtern coaſt of Africa, between 10° and 20′ eaſt longitude, and between the equator and 18° ſouth latitude; comprehending the countries of Loango, Angola, and Benguella. It is bounded by the kingdom of Benin on the north; by Mataman, a part of Caffraria, on the ſouth; and by the Atlantic ocean, on the weſt; and is ſometimes called the lower Guinea.

CONGREGATION, an aſſembly of ſeveral eccleſiaſtics united, ſo as to conſtitute one body; as an aſſembly of cardinals, in the conſtitution of the pope's court, met for the diſpatch of ſome particular buſineſs.

Theſe aſſemblies, being ſixteen in number, are diſtributed into ſeveral chambers, after the manner of our offices and courts: the firſt whereof is the pope's congregation, whoſe buſineſs it is to prepare the moſt difficult beneficiary matters to be afterwards debated in the conſiſtory: the ſecond is the congregation of the holy office, or the inquiſition: the third is the congregation *de propaganda fide*: the fourth is the congregation for explaining the council of Trent: the fifth is the congregation of the index, deputed to examine into pernicious and heretical books: the ſixth is the congregation of immunities, eſtabliſhed to obviate the difficulties that ariſe in the judgments of ſuch ſuits as are carried on againſt churchmen: the ſeventh is the congregation of biſhops and regulars: the eighth is the congregation for the examination of biſhops, &c.

CONGREGATION is alſo uſed for a company or ſociety of religious, cantoned out of any order, ſo as to make a ſubdiviſion of the order itſelf; as the congregation of Cluny, &c. among the benedictines.

CONGREGATION is likewiſe uſed for aſſemblies of pious perſons, in manner of fraternities.

CONGREGATION, in phyſics, is a term uſed by Dr. Grew for the loweſt degree of mixtion; or that wherein the parts of the mixture do not adhere to each other, but only touch in a ſingle point; that author being of opinion, that the particles of all fluids touch only in this manner: or that their coheſion amounts only to a congregation. See COHESION and FLUID.

CONGREGATIONALISTS, in church-hiſtory, a ſect of proteſtants who reject all church-government, except that of a ſingle congregation. In other matters, they agree with the preſbyterians. See the article PRESBYTERIANS.

CONGRESS, in political affairs, an aſſembly of commiſſioners, envoys, deputies, &c. from ſeveral courts meeting to concert matters for their common good.

CONGRESS, in a judicial ſenſe, the trial made by appointment of a judge, before ſurgeons and matrons, in order to prove whether or no a man be impotent, before ſentence is paſſed for the diſſolution of a marriage, ſolicited upon ſuch a complaint.

The trial of virility by congreſs had its origin in France, from the aſſurance of a man, who, being hard preſſed by his wife, demanded the congreſs in open court. The judge finding it could not be denied, as it was the ſureſt evidence the caſe could admit of, it was granted him, and obtained afterwards as a branch of the french juriſprudence for upwards of a hundred years: but it was annulled by arret of parliament, as being found precarious; ſome having failed under the experiment, out of mere modeſty and ſhame, which is found to have the ſame effect

effect with actual impotency. Neither the civil nor canon law make any mention of this trial.

CONGRUITY, in the ſchools, a ſuitableneſs or relation of agreement between things. The ſyſtem of congruity in matters of grace conſiſts in this, that God who knows perfectly the nature of grace, and the diſpoſitions of the will in all the circumſtances that ſhall befall a man, gives graces with which, by virtue of their congruity with the will of man conſidered in thoſe circumſtances, man will always infallibly, but not neceſſarily, do what God would have him do.

CONGRUITY, in geometry, is applied to figures, lines, &c. which being laid upon each other, exactly agree in all their parts, as having the very ſame dimenſions.

CONGRUITY, among naturaliſts, a property relative to a fluid body, whereby any part of it is readily united with any other part, either of itſelf, or of any other ſimilar fluid, or ſolid body. And incongruity is a property by which it is hindered from uniting with the ſolid or fluid body diſſimilar to it. Thus quickſilver will ſtick to gold, ſilver, lead, tin, &c. and unite with them, but will roll off from wood, ſtone, glaſs, &c. and water, which will wet ſalt and diſſolve it, will ſlip off from tallow without adhering to it, as alſo from a duſty ſurface, and from the feathers of water fowls.

CONI, a ſtrong town of Piedmont, in Italy, ſituated upon the river Stura, thirty-two miles ſouth of Turin, in 7° 30′ eaſt long. and 44° 25′ north lat.

Coni was beſieged by the French in 1744, but they were obliged to raiſe the ſiege on account of the great numbers of troops they loſt in the attacks, and by the badneſs of the ſeaſon.

CONIC-SECTIONS, curves formed from the ſection of a cone by a plane.

The curves that generally paſs under the name of conic ſections are three, *viz.* the ellipſis, parabola, and hyperbola; for tho' the triangle and circle are formed from the ſection of a cone, yet they are not uſually conſidered in that capacity.

If a right cone be cut directly through its axis, the plane or ſuperficies of that ſection will be a plain iſoſceles triangle as HVG, (plate XLIX. fig. 6. n°. 1.) to wit, HV, and VG, the ſides of the cone will be the ſides of the triangle, HG the diameter of the cone's baſe will be the baſe of the triangle, and its axis VC will be the perpendicular height of the triangle. See the article TRIANGLE.

If a right cone be cut any where off by a right line parallel to its baſe, the plane of that ſection will be a circle, becauſe the baſe of the cone is a circle. Such is *bg*, *ibid.* See the article CIRCLE.

If a right cone be any where cut by a right line that cuts both its ſides, but not parallel to its baſe as TS (*ibid.* n°. 2.) the plane of that ſection will be an ellipſis, commonly called an oval; that is, an oblong or imperfect circle, having ſeveral diameters, and two particular centers. See ELLIPSIS and DIAMETER.

If any cone be cut into two parts by a right line parallel to one of its ſides, as SA (*ibid.* n°. 3.) the plane of that ſection, namely, S*b* BAB*b*, is called a parabola. See the article PARABOLA.

If a cone be any where cut by a right line either parallel to its axis, as SA (*ibid.* n°. 4.) or otherwiſe, as *x* N, in ſuch a manner that the interſecting line when continued through one ſide of the cone, as at S or *x*, will meet with the other ſide of the cone if it be continued beyond the vertex V, as at T, then is the plane of that ſection, namely, S*b* BAB*b* called an hyperbola. See HYPERBOLA.

Theſe five ſections, namely, the triangle, circle, ellipſis, parabola, and hyperbola, are all the planes that can poſſibly be produced from a cone. But of them the three laſt, as we ſaid above, are only called conic ſections, both by antient and modern geometers.

From the geneſis of theſe ſections, it may be obſerved how one ſection degenerates into another. For an ellipſis being that plane of any ſection of the cone which is between the circle and parabola, it will be eaſy to conceive that there may be great variety of ellipſis produced from the ſame cone; and when the ſection comes to be exactly parallel to one ſide of the cone, then the ellipſis degenerates into a parabola. Now a parabola being that ſection whoſe plane is always exactly parallel to the ſide of the cone, cannot vary as the ellipſis may; for ſo ſoon as ever it begins to move out of that poſition of being parallel to the ſide of the cone, it degenerates either into an ellipſis or hyperbola. That is, if the ſection inclines towards the plane of the cone's baſe, it becomes an ellipſis; but if it incline towards the cone's vertex, it then becomes an hyperbola, which is the

plane of any ſection that falls between the parabola and the triangle: and therefore there may be as many varieties of hyperbolas produced from one and the ſame cone, as there may be ellipſis.

In ſhort, a circle may change into an ellipſis, the ellipſis into a parabola, the parabola into an hyperbola, and the hyperbola into a plain iſoſceles triangle. And the center of the circle, which is its focus, divides itſelf into two focus's, ſo ſoon as ever the circle begins to degenerate into an ellipſis; but when the ellipſis changes into a parabola, one end of it flies open, one of its foci vaniſhes, and the remaining focus goes along with the parabola when it degenerates into an hyperbola. And when the hyperbola degenerates into a plain iſoſceles triangle, this focus becomes the vertical point of the triangle, namely, the vertex of the cone. So that the center of the cone's baſe may be truly ſaid to paſs gradually thro' all the ſections until it arrive at the vertex of the cone, ſtill carrying its latus rectum along with it. For the diameter of a circle being that right line which paſſes through its center or focus, and by which all other right lines drawn within the circle are regulated and valued, may be called the circle's latus rectum; and though it loſe the name of diameter when the circle degenerates into an ellipſis, yet it retains the name of latus rectum with its firſt properties in all the ſections, gradually ſhortening as the focus carries it along from one ſection to another, until at laſt both it and the focus become coincident, and terminate in the vertex of the cone. For the nature and properties of the ellipſis, parabola, and hyperbola, ſee each under its proper head.

The moſt celebrated treatiſes on conic ſections, are thoſe of Apollonius Pergæus, Mydorgius de Sectionibus Conicis, Gregory St. Vincent's Quadratura Circuli & Sectionum Coni, De la Hire's Opus de Sectionibus Conicis, De Witt's Elementa Curvarum, Dr. Wallis's Conic ſections, De l'Hoſpital's analytical Treatiſe of conic ſections and their uſe, Milne's Elementa Sectionum Conicarum novâ methodo demonſtrata, Mr. Simpſon's and Mr. Muller's Conic ſections, &c.

CONICHTHYODONTES, or PLECTRONITÆ, in natural hiſtory, one of the three names the foſſile teeth of fiſhes are known by.

Tho' authors aſſure us that theſe are the teeth of a fiſh, the jaws having been found with theſe bodies in them, yet they do not pretend to know to what fiſh they belong. They are generally of an oblong conic figure, broad at the baſe, and narrower at the point, where they are uſually a little crooked: they are hollowed at the root, and are from the tenth of an inch to two inches long, commonly of a cheſnut colour, and are found in the ſtrata of clay, but moſt uſually in thoſe of ſtone; and ſeen more frequent in England, than in any other part of the world.

CONIFEROUS TREES, in gardening, ſuch as bear hard, dry ſeed-veſſels, of a conical figure, conſiſting of ſeveral woody parts, being moſtly ſcaly, adhering cloſely together, and ſeparating when ripe.

Of this ſort is the cedar of Lebanon, fir, pine, &c.

CONINGSECK, the capital of a county of the ſame name in the circle of Swabia, in Germany, about twenty miles north of Conſtance: eaſt long. 9° 23′, north lat. 47° 50′.

CONJOINT, or CONJUNCT, is applied, in the antient muſic, in the ſame ſenſe as conſonance. See CONSONANCE.

CONJOINT DEGREES, two notes which follow each other immediately in the order of the ſcale, as *ut* and *re*. See the article SCALE.

CONJOINT TETRACHORDS, two tetrachords, or fourths, where the ſame chord is the higheſt of one, and the loweſt of the other. See the article CHORD.

CONISOR, or COGNISOR, in law, is uſed in the paſſing of fines for him that acknowledges the fine. See FINE.

He to whom the fine is acknowledged, is the cognizee.

CONISSALÆ, in natural hiſtory, a claſs of foſſils, naturally and eſſentially compounded, not inflammable, nor ſoluble in water, found in detached maſſes, and formed of cryſtalline matter debaſed by earth.

Of this claſs there are two orders, and of each of theſe only one genus. Coniſſalæ of the firſt order, are found in form of a naturally regular and uniform powder, all the genuine particles of which are nearly of one determinate ſhape, appearing regularly concreted, and not fragments of others once larger. Coniſſalæ of the ſecond order, are found in form of a rude, irregular, and ſhapeleſs powder, the particles of which are never

of

of any determinate particular figure, but ſeem broken fragments of ſome once larger maſſes.

To the former genus belong the different kinds of ſand; and to the latter, the ſaburræ, or grits. See SABURRÆ and SAND.

CONISTERIUM, κονιστηριον, in grecian antiquity, a place within the area of the palæſtra, or gymnaſium, where the duſt, with which they beſpringled thoſe that had been anointed for wreſtling, was kept.

CONJUGATE DIAMETER, or *axis of an ellipſis*, the ſhorteſt of the two diameters, or that biſecting the tranſverſe axis. See the article AXIS.

CONJUGATE HYPERBOLA'S. If there be two oppoſite hyperbolas A M, *a m*, plate XLIX. fig. 7. whoſe principal axis is the line A *a*, and conjugate axis the line B *b*; and if there be two other hyperbola's whoſe principal axis is the line B *b*, and conjugate one the line A *a*; then thoſe four hyperbola's are called conjugate hyperbola's: the two former oppoſite one's being conjugates to the latter. See AXIS, HYPERBOLA, and CONIC-SECTIONS.

CONJUGATION, in grammar, a regular diſtribution of the ſeveral inflexions of verbs in their different voices, moods, tenſes, numbers and perſons, ſo as to diſtinguiſh them from one another.

The Latins have four conjugations, diſtinguiſhed by the terminations of the infinitive āre, ēre, ĕre, and īre; the vowels before *re* of the infinitive in the firſt, ſecond, and fourth conjugations being long vowels, and that before *re* in the infinitive of the third being a ſhort one. See the article VOWEL.

The Engliſh have ſcarce any natural inflexions, deriving all their variations from additional particles, pronouns, &c. whence there is ſcarce any ſuch thing as ſtrict conjugations in that language. See the article MOOD.

The french grammarians reduce the number of conjugations in their language to that in the Latin, and theſe terminating in *er*, *re*, *ir*, and *oir*.

CONJUGATION, in anatomy, is applied to a pair of nerves ariſing together, and ſerving the ſame operation, ſenſation, and motion. See the article CONJOINT.

CONIUM, HEMLOCK, in botany, a genus of the pentandria-digynia claſs of plants, the flower whereof is compound; the particular ones conſiſting of five unequal and cordated petals: the fruit is roundiſh, ſtriated, and diviſible into two parts, containing two ſeeds, plain on the one ſide, and convex on the other.

This is the cicuta of other authors, or the common hemlock, which till very lately was rejected from all inward uſe in medicine, on account of its poiſonous qualities; but the extraordinary virtue and efficacy of this plant, uſed as well internally as externally, in the cure of cancers, ſchirrous and oedematous tumours, malignant and fiſtulous ulcers, and cataracts, are now brought into the higheſt reputation, from obſervations, made in a variety of caſes in which this remedy was adminiſtered, by Dr. Stork, the baron Van Swieten, Dr. Kollman, and others of the moſt eminent phyſicians and ſurgeons at Vienna.

CONJUNCT, or CONJOINT. See the article CONJOINT.

CONJUNCTION, in aſtronomy, the meeting of two ſtars or planets, in the ſame degree of the zodiac.

This conjunction is either true, or apparent. The true conjunction is when a right line, drawn from the eye through the center of one of the bodies, would paſs through that of the other: in this caſe the bodies are in the ſame degree of longitude and latitude: and here the conjunction is alſo ſaid to be central, if the ſame line, continued from the two centers through the eye, do alſo paſs through the center of the earth.

Apparent conjunction, is when the two bodies do not meet preciſely in the ſame point, but are joined with ſome latitude. In this caſe a right line, drawn through the center of the two bodies, would not paſs through the center of the earth, but through the eye of the ſpectator: this conjunction is alſo called partile.

The moon is in conjunction with the ſun, when they meet in the ſame point of the ecliptic, which happens every month; and eclipſes of the ſun are always occaſioned by the conjunction of the ſun and moon in or near the nodes of the ecliptic. See the article SYZYGY.

For the character of conjunction, ſee the article CHARACTER.

CONJUNCTION, in grammar, an undeclinable word, or particle, which ſerves to join words and ſentences together, and thereby ſhews their relation or dependence one upon another. The conjunction, which is uſually placed laſt in the eight parts of ſpeech, is of great uſe

uſe to render the diſcourſe ſmooth and fluent, and ſerves many good purpoſes in the argumentative or narrative ſtile; but ſhould ever be omitted where a perſon ſpeaks with emotion, as only ſerving to weaken and enervate it. Conjunctions are of ſeveral kinds.

Adverſative CONJUNCTIONS, ſuch as are reſtrictive, or expreſſive of contrarieties; as, *but, nevertheleſs, although*.

Cauſal CONJUNCTIONS, ſuch as expreſs that the reaſon of ſome thing is advanced; as, *for, becauſe, ſeeing, inaſmuch as*.

Concluſive CONJUNCTIONS, ſuch as ſhew that a conſequence is drawn; as, *of conſequence, for which reaſon, but then, ſo that*.

Conditional CONJUNCTIONS, thoſe that denote a condition; as, *on condition that, if, if not, in caſe of, provided that*.

Copulative CONJUNCTIONS, ſuch as ſhew a comparilon, or expreſs a relation of union between two things; as, *and, only, as much as, in the ſame manner as, not only, inaſmuch as, but alſo, neither more nor leſs*.

Continuative CONJUNCTIONS, ſuch as denote a ſucceſſion or continuation of the diſcourſe; as, *whatever it be, even in effect*.

Diſjunctive CONJUNCTIONS, ſuch as import a relation of ſeparation, or diviſion; as, *neither, whether, or*.

Dubitative CONJUNCTIONS, ſuch as expreſs ſome doubt, or ſuſpenſion of opinion; as, *if, that is to ſay*, &c.

CONJUNCTIVA, in anatomy, the ſame with adnata. See ADNATA.

CONJURATI FRATRES, in law. See the article FRATRES CONJURATI.

CONJURATION, magic words, characters, or ceremonies, whereby evil ſpirits, tempeſts, &c. are ſuppoſed to be raiſed, or driven away.

The romiſh prieſts pretend to expel devils, by preparing holy water in a particular manner, and ſprinkling it over the poſſeſſed, with a number of conjurations and exorciſms. Some that pretend to diſtinguiſh conjuration from witchcraft, ſay, that the former is the effect of prayers and invocation of God's name, &c. to compel the devil to do what is deſired: whereas the latter attains its end by an immediate application to the devil himſelf, who is ſuppoſed always ſo complaiſant, from an agreement between them, as to do whatever is required.

CONN, or COND, in the ſea-language. See the article COND.

CONNAUGHT, the moſt weſterly province of Ireland.

CONNARUS, in botany, a genus of the monadelphia-decandria claſs of plants, the flower of which conſiſts of five ſpear-ſhaped erect equal petals; the fruit is a capſule formed of two valves, and containing one cell, wherein is lodged a ſingle ſeed.

CONNECTICUT, a britiſh colony of north America, bounded by the Maſſachuſet colony on the north-eaſt; by the ſea, on the ſouth; and by New York, on the weſt; being about 100 miles in length, and 80 in breadth.

This colony conſtitutes a diſtinct government, of a different form from that of New England.

CONNECTION, or CONNEXION, the relation whereby one thing adheres to, or depends upon, another. Such is the relation between Euclid's propoſitions, that the latter cannot ſubſiſt but by its connection with the former.

CONNECTION, or CONTINUITY, in the drama, conſiſts in the joining of the ſeveral ſcenes together. See DRAMA.

The connection is ſaid to be obſerved, when the ſcenes of an act ſucceed one another immediately, and are ſo joined, as that the ſtage is never left empty.

CONNIVENT VALVES, in anatomy, thoſe wrinkles, cellules, and vaſcules, which are found in the inſide of the two great inteſtines, the ileum and jejunum.

The inner tunic of the guts, being longer than the middle or the outward tunic, does frequently wrinkle, or bag out, in many places, by which means the paſſage for the contents becomes ſtraitened, and the matter through the guts then deſcends more ſlowly, ſo that the lacteals have the more time to imbibe the chyle.

CONNOISSEUR, a french word much uſed of late in engliſh, to ſignify a perſon well verſed in any thing: whence it is uſed for a critic, or a perſon who is a thorough judge of any ſubject.

CONNOR, a city of Ireland, in the county of Antrim, and province of Ulſter, ſituated about ſix miles north of Antrim, in 6° 30′ weſt longitude, and 54° 50′ north latitude.

CONOCARPUS, the BUTTON-TREE, in botany, a genus of the pentandria-monogynia claſs of plants, having no corolla, nor any pericarpium diſtinct from the ſeed, which is naked and ſingle, having on each ſide a prominent, membranaceous margin.

CONOID, in geometry, a ſolid body, generated by the revolution of a conic ſection about its axis. See the article CONIC SECTIONS.

Elliptical CONOID, is a ſolid formed by the revolution of an ellipſis about one of its diameters, and more generally called a ſpheroid. See the article SPHEROID.

Parabolical CONOID, is generated by the revolution of a parabola about its axis. See the article PARABOLA.

Hyperbolical CONOID, is generated by the revolution of an hyperbola about its axis. See the article HYPERBOLA.

CONOIDES, in anatomy, a gland found in the third ventricle of the brain called pinealis, from its reſemblance to a pine-apple. Deſcartes fixed the ſeat of the rational ſoul in this gland. See the article PINEAL GLAND.

CONQUERNA, a port-town of Britany, in France, forty miles ſouth-eaſt of Breſt; weſt long. 3° 50′, north lat. 47° 55′.

CONQUET, a port-town of Britany, in France, about eight miles weſt of Breſt; weſt long. 4° 46′, north lat. 48° 26′.

CONSANGUINITY, the relation ſubſiſting between perſons of the ſame blood, or who are ſprung from the ſame root. See the article KINDRED.

Conſanguinity terminates in the ſixth and ſeventh degree, excepting in the ſucceſſion of the crown, in which caſe it is continued to infinity.

Marriage is prohibited by the church to the fourth degree of conſanguinity inclusive; but by the law of nature, conſanguinity is no obſtacle to marriage, except it be in the direct line.

The civilians call fratres conſanguinei, thoſe born of the ſame father, in oppoſition to fratres uterini, who are only born of the ſame mother. It is the common opinion that the former was not allowed to complain of an inofficious teſtament, that is, of being diſinherited without cauſe; excepting from the turpitude of the perſon, appointed heir in their place.

CONSCIENCE, in ethics, a ſecret teſtimony of the ſoul, whereby it gives its approbation to things that are naturally good, and condemns thoſe that are evil. When it judges of an action to be performed, it is called in the ſchools an antecedent conſcience; and when it paſſes ſentence on an action which is performed, it is called a ſubſequent conſcience. When the mind is ignorant or uncertain about the moment of an action, or its tendency to good; or when there are ſeveral circumſtances in the caſe, ſome of which being doubtful, render the mind dubious concerning the morality of an action, this is called a doubtful or ſcrupulous conſcience; and if it miſtakes concerning theſe, it is called an erroneous conſcience. If the error or ignorance is involuntary or invincible, the action proceeding from that error, or from that ignorance, is reckoned innocent. But if they are the effect of negligence, or of affectation, the conduct flowing from ſuch error is criminal. Not to follow one's conſcience, though erroneous and ill-informed, Mr. Hutcheſon likewiſe reckons criminal, as it is the guide of life, and to counteract it ſhews an incorrigible ſpirit; yet to follow an erroneous conſcience is likewiſe criminal, if the error which miſled the conſcience was the effect of inattention, or of any criminal paſſion.

Some divines maintain that conſcience is infallible, and hold it to be that immutable law by which God will judge men. They deny that the underſtanding can be the ſource of errors, and lay them all at the door of the will.

CONSCRIBED, a term uſed by ſome geometricians for circumſcribed. See the article CIRCUMSCRIBED.

CONSCRIPT, *conſcriptus*, in roman antiquity, an appellation given to the ſenators of Rome, who were called conſcript-fathers, on account of their names being entered all in one regiſter.

CONSECRATION, the act of devoting any thing to the ſervice and worſhip of God.

The moſaical law ordained, that all the firſt-born, both of man and beaſt, ſhould be ſanctified or conſecrated to God. We find alſo, that Joſhua conſecrated the Gibeonites, as Solomon and David did the Nethinims, to the ſervice of the temple; and that the Hebrews ſometimes conſecrated their fields and cattle to the Lord, after which they were no longer in their power.

The New Teſtament furniſhes us with inſtances of conſecration. Chriſtians in general are conſecrated to the Lord, and biſhops and other miniſters of the goſpel are in a peculiar manner ſet apart for his ſervice.

Among the antient chriſtians, the conſecration of churches was performed with a great deal of pious ſolemnity. In what manner it was done for the three firſt ages is uncertain, the authentic accounts reach-

reaching no higher than the fourth, when, in the peaceable reign of Conſtantine, churches were every where built and dedicated with great ſolemnity. Some think the conſecration conſiſted in ſetting up the ſign of the croſs, or in placing a communion-table in the church; and others, that no more was done than preaching a panegyrical ſermon in commemoration of the founder, and that then they proceeded to prayers, one of which was compoſed on purpoſe for the church to be conſecrated. The romaniſts have a great deal of pious foppery in the ceremonies of conſecration, which they beſtow on almoſt every thing, as bells, candles, books, water, oil, aſhes, palms, ſwords, banners, pictures, croſſes, agnus dei's, roſes, children's clouts, &c.

In England, churches have been always conſecrated with particular ceremonies, the form of which was left to the diſcretion of the biſhop. That obſerved by biſhop Laud, in conſecrating St. Catharine Creed church, in London, gave great offence.

CONSECRATION is particularly uſed for the benediction of the elements in the euchariſt. There is a great controverſy between the latin and greek churches, touching the words of conſecration: the romaniſts, following St. Thomas and the ſchoolmen, believe that the conſecration of the bread and wine conſiſts in theſe words, *This is my body, this is my blood.* The greeks, on the contrary, attribute the change of the elements to a certain prayer which they call the invocation of the Holy Ghoſt, rehearſed after theſe words, *this is my body*, &c.

CONSECRATION, among medaliſts, is the ceremony of the apotheoſis of an emperor, the proceſs of which ſee under the article APOTHEOSIS.

The conſecration on medals is repreſented thus: on one ſide is the emperor's head, crowned with laurel, and ſometimes veiled, and the inſcription gives him the title DIVVS; on the reverſe is a temple or altar, or an eagle taking flight toward heaven; and ſometimes the emperor is ſeen in the air, borne up by the eagle; the inſcription always CONSECRATIO.

CONSECTARY, a deduction, or conſequence, drawn from a preceding propoſition. Some rather chooſe to call it a conſequence, and others a corollary. See the article COROLLARY.

CONSECUTIVELY, in the ſchool-philoſophy, is ſometimes uſed in contradiſtinction to antecedently; and ſometimes to effectively, and cauſally.

Thus, ſay the ſchoolmen, the corruption of one thing is the generation of another, not effectively, but conſecutively; that is, ſince matter cannot, in the nature of things, be without form, the generation of one thing muſt neceſſarily follow the corruption of another.

CONSENT, in a general ſenſe, denotes much the ſame with aſſent. See the article ASSENT.

CONSENT *of parts*, in the animal œconomy, an agreement or ſympathy, whereby when one part is immediately affected, another, at a diſtance, becomes affected in the ſame manner.

It can hardly be imagined what a conſent there is between the brain and its membranes, between the ſtomach and the adjoining inteſtines; theſe being very nervous and endued with an exquiſite ſenſe: whence many ſtudents are troubled with a bad digeſtion, coſtiveneſs, and the hypochondriac paſſion.

The harmony and ſympathy of the nervous parts is of great uſe in phyſic, for without an accurate knowledge of this, many ſymptoms of diſeaſes can ſcarcely be explained.

It is to be obſerved, that the nervous membranaceous parts are, firſt, the membranes of the brain, and ſpiral marrow; then the nervous membranes which inveſt the organs of the ſenſes: to theſe may be added thoſe which cover the bones, head, teeth, joints, and muſcles. Likewiſe the œſophagus, ſtomach, and the whole volume of inteſtines, which is entirely nervous and membranaceous. The ſame conſent obtains alſo in the whole ſyſtem of the bilious and urinary ducts; the bladder, glands, and ſkin. In all theſe parts there is a wonderful connection, conſent, ſympathy, and communication of motions, as well as hurts, when they are affected by any violent cauſe: all which is owing to the nerves; for when they are moleſted, there ariſes a ſenſe of pain, and a ſtricture of the adjacent parts, eſpecially of the veſſels.

CONSEQUENCE, in logic, the concluſion, or what reſults from reaſon or argument. See CONCLUSION.

The conſequence is that other propoſition in which the extremes or premiſſes of a ſyllogiſm are joined or ſeparated; and is gained from what was aſſerted in the premiſſes.

This word, in a more reſtrained ſenſe, is uſed

uſed for the relation or connection between two propoſitions, whereof one is inferred from the other.

CONSEQUENT, ſomething deduced or gathered from a former argumentation. But, in a more preciſe ſenſe, it is uſed for the propoſition which contains the concluſion, conſidered in itſelf, without any regard to the antecedent: in which ſenſe the conſequent may be true, though the conſequence be falſe. See the preceding article.

CONSEQUENT *of a ratio*, in mathematics, the latter of the two terms of a ratio, or that to which the antecedent is compared; thus in $m:n$, or m to n, n is the conſequent, and m the antecedent. See the articles RATIO and PROPORTION.

CONSEQUENTE, CONSEQUENZA, or CONSEGUENZA, in muſic, a part of a fugue or canon is ſaid to be in conſequente, when it follows the firſt part, called the guide, imitating its motions, notes and figures.

CONSERVATOR, an officer ordained for the ſecurity and preſervation of the privileges of ſome cities and communities, having a commiſſion to judge of, and determine the differences among them.

In moſt catholic univerſities there are two conſervators, one whereof decides the differences between the regents, ſtudents, *&c.* and the other takes cognizance of ſpiritual matters between eccleſiaſtics: the former is called conſervator of royal privileges, or thoſe granted by kings; the latter is called the conſervator of apoſtolical privileges, or thoſe granted by the pope.

CONSERVATOR *of the peace*, in our antient cuſtoms, a perſon who had a ſpecial charge to keep the king's peace.

The chamberlain of Cheſter is ſtill a conſervator in that county; and petty conſtables are, by the common law, conſervators, *&c.* of the king's peace.

CONSERVATOR *of the truce and ſafe conducts*, an officer formerly appointed by the king's letters patent, whoſe buſineſs it was to make enquiry of all offences committed againſt the king's truce and ſafe conducts upon the main ſeas out of the liberties of the cinqueports.

CONSERVATORY, a term ſometimes uſed for a green-houſe, or ice-houſe. See the articles GREEN-HOUSE and ICE-HOUSE.

CONSERVE, in pharmacy, a form of medicine, contrived to preſerve the flowers, herbs, roots, pills, or fruits, of ſeveral ſimples, as near as poſſible to what they are when freſh gathered.

All the things which come under this diviſion are to be regarded pretty much as the ſyrups, more for the ſake of mixing and rendering palatable other things of greater efficacy, than to anſwer any intention of cure, in regard there is ſo much ſugar made uſe of in a conſerve, that a doſe of the ſimple, to anſwer any intention of moment, is rendered inconvenient to take.

Conſerves are made by beating up the thing to be preſerved, with ſugar, *viz.* a a triple quantity thereof to thoſe that are moſt moiſt, and a double quantity to thoſe that are leaſt ſo.

CONSIDERATION, in law, the material cauſe or ground of a contract, without which the party contracting would not be bound.

This conſideration is either expreſſed, as where a perſon agrees to pay 5 l. for a houſe; or it is implied, when the law itſelf enforces a conſideration, as in the caſe of a perſon's coming to an inn, and taking meat, drink, and lodging for himſelf and his horſe; the law here preſumes he intends to pay for them, though there is no expreſs contract between him and the innkepper: wherefore, if he do not diſcharge the houſe, the hoſt may ſtop his horſe.

CONSIGNMENT, in law, the depoſiting any ſum of money, bills, papers, or commodities in good hands; either by appointment of a court of juſtice, in order to be delivered to the perſons to whom they are adjudged; or voluntarily, in order to their being remitted to the perſons they belong to, or ſent to the places they are deſigned for.

CONSIGNMENT *of goods*, in commerce, is the delivering or making them over to another: thus, goods are ſaid to be conſigned to a factor, when they are ſent to him, to be ſold, *&c.* or when a factor ſends back goods to his principal, they are ſaid to be conſigned to him.

CONSISTENCE, in phyſics, that ſtate of a body wherein its component particles are ſo connected or entangled among themſelves, as not to ſeparate or recede from each other. It differs from continuity in this, that it implies a regard to motion or reſt, which continuity does not, it being ſufficient to denominate a thing continuous, that its parts are contiguous to each other. Conſiſtence is generally uſed

with regard to the thickneſs and thinneſs of medicines; and we may obſerve, that not only the gratefulneſs, but alſo the operation of medicines depend, in ſome meaſure, upon their conſiſtence; for medicines of a thick conſiſtence are taken into the ſtomach, and penetrate into the body, with greater difficulty than ſuch as are thin and liquid: for this reaſon thick medicines are generally nauſeous; and for this reaſon honey is diluted with water, that it may more eaſily operate as a detergent upon the obſtructed pores of the ſkin. On the contrary, a thick conſiſtence is, on ſome occaſions, more to be deſired; in ulcers, for inſtance, of the aſpera arteria and œſophagus, where medicines muſt be given that can adhere long to the part affected. And hence it happens, that in medicines to be inſpiſſated, ſome things are added which neither add to nor impair their operation, but only have a reſpect to their conſiſtence; ſuch as wax, for inſtance, in ointments and plaſters.

CONSISTENCE, when uſed relative to age or a diſeaſe, imports the ſtate or acme thereof: thus we diſtinguiſh three ſtates or ſtages of a tree, its growth, conſiſtence or age, beyond which it does not grow, and return. The conſiſtence of oaks is from fifty to one hundred and ſixty years. Some, however, hold that their conſiſtence only commences from one hundred years, aſſerting that they grow till that time, and that they continue in that ſtate of perfection to two hundred years of age.

CONSISTENT BODIES, a term frequently uſed by Mr. Boyle, to ſignify ſuch bodies, whoſe parts are firmly united together, ſo that they do not ſo eaſily ſlide over one another's ſurfaces as the parts of a fluid bodies do.

That author has an eſſay of the Atmoſphere of Conſiſtent Bodies, wherein he ſhews that all, even ſolid, hard, fixed bodies emit effluvia to a certain ſpace all around them. See EFFLUVIUM.

CONSISTENTES, in church-hiſtory, an appellation given to ſuch penitents as were permitted to aſſiſt at prayers, but not to partake of the ſacrament.

CONSISTORIAL, ſomething belonging to a conſiſtory. See the next article.

CONSISTORY, at Rome, is an eccleſiaſtical aſſembly held in the preſence of the pope, for the reception of princes, or their ambaſſadors, for the canonization of ſaints, for the promotion of cardinals, and other important affairs.

When a public conſiſtory is to be held, the pope's throne is erected in the great hall of the apoſtolic palace: the pope is ſeated on cloth of gold, under a canopy of the ſame, and the foot of the throne is covered with red cloth. The cardinal biſhops and prieſts ſit on the right, below the throne, and the deacons on the left, but ſo as to have their faces towards the pope. The archbiſhops, biſhops, protho-notaries, and other prelates, ſit on the ſteps of the throne: on the loweſt ſtep the ſubdeacons, auditors, clerks of the chamber, and acolyths with woollen cowls: and the eccleſiaſtical officers of the pope's court on the ground. The nephews of the reigning pope, and other roman princes are ranged on each ſide of the throne: and the entrance of the paſſage leading to the throne is occupied by the pope's guard.

Beſides the public conſiſtory there is alſo a private one, held in a retired chamber, called the chamber of papegay, into which none are admitted but cardinals: here the pope appears in a white ſilk caſſock, and a red velvet cap laced with ſilver; and here are firſt propoſed and paſſed all bulls for biſhopricks, abbeys, &c. which from thence are called conſiſtorial benefices.

The biſhop's courts in England, held before their chancellors or commiſſaries, are called conſiſtory courts.

CONSISTORIES, among the Jews, courts of judicature, conſiſting of twenty-three perſons, who were appointed to ſit in judgment upon the lives and fortunes of the people, and decided all cauſes, a few only excepted. Theſe conſiſtories always ſate in the gates of the cities. Their ſeſſion began after morning-prayers, and continued to the end of the ſixth hour.

CONSOLATION, a figure in rhetoric, wherein the orator endeavours to moderate the grief of another. A principal regard is always to be had to the circumſtances and relations of the parties: thus, a ſuperior may interpoſe his authority, and even chide: a wiſe man may diſpute; ſentences will become him: an inferior is to ſhew reſpect and affection, and own that he had this from ſome wiſe or learned perſon: and an equal is to appeal to their common friendſhip.

CONSOLE, in architecture, an ornament cut upon the key of an arch, which has a pro-

a projecture, and, on occaſion, ſerves to ſupport little corniches, figures, buſts, and vaſes. They are alſo called mutules and modillions, according to their form: ſome of them are ſtriated, others in form of cartouches, others have drops in form of triglyphs. Thoſe made at the end of a plank of wood, cut triangularwiſe, are called ancones. See the articles MODILLIONS and ANCONES.

Mr. Le Clerc is of opinion that a conſole ſhould always have ſomething maſſive to ſuſtain, and ſerve it as a reſt.

CONSOLIDATION, in medicine, the action of uniting broken bones, or the lips of wounds, by means of conglutinating medicines.

CONSOLIDATION, in the civil law, ſignifies the uniting the poſſeſſion or profit of land with the property, and *vice verſa*. Thus, if a man have by legacy *uſufructum fundi*, and afterwards buy the property, or fee ſimple, of the heir, this is called a conſolidation.

CONSOLIDATION, in our law, is the uniting two benefices into one by aſſent of the ordinary, patron, and incumbent.

CONSONANCE, in muſic, is ordinarily uſed in the ſame ſenſe with concord, *viz.* for the union or agreement of two ſounds produced at the ſame time, the one grave and the other acute; which mingling in the air in a certain proportion, occaſion an accord agreeable to the ear. See the article CONCORD.

Moſt authors confound conſonance and concord together, tho' ſome of the more accurate diſtinguiſh them, making conſonance a mere ſounding of two notes together, or in the ſame time, in contradiſtinction to the motion of thoſe ſounds in ſucceſſion, or one after the other. In effect the two notions coincide; for two notes thus played in conſonance, conſtitute concord; and two notes that pleaſe the ear in conſonance, will pleaſe it in ſucceſſion. See SUCCESSION.

Notes in conſonance conſtitute harmony, as notes in ſucceſſion conſtitute melody. See the articles HARMONY, MELODY, and alſo TUNE.

In the popular ſenſe, conſonances are either ſimple or compound. The moſt perfect is uniſon; though many authors, both among the antients and moderns, diſcard it from the number of conſonances, as conceiving conſonances an agreeable mixture of grave and acute ſounds, and not a repetition of the ſame ſound. The firſt conſonance is the octave, then the fifths, the fourths, the thirds, and ſixths: the reſt are multiples, or repetitions of theſe.

CONSONANCE, in grammar, ſignifies a like cadence of words and periods, a fault to be avoided in engliſh, though the antients make a figure of them, which they call ὁμοιοτέλευτον.

CONSONANT, a letter that cannot be ſounded without ſome ſingle or double vowel before or after it.

Conſonants are firſt divided into ſingle and double; the double are *x* and *z*, the reſt are all ſingle: and theſe are again divided into mutes and liquids; eleven mutes, *b*, *c*, *d*, *f*, *v*, *g*, *j*, *k*, *p*, *q*, *t*; and four liquids, *l*, *m*, *n*, *r*. But the moſt natural diviſion of conſonants is that of the hebrew grammarians, who have been imitated by the grammarians of other oriental languages. Theſe divide the conſonants into five claſſes, with regard to the five principal organs of the voice, which all contribute, it is true, but one more notably than the reſt, to certain modifications, which make five general kinds of conſonants. Each claſs comprehends ſeveral conſonants, which reſult from the different degrees of the ſame modification, or from the different motions of the ſame organs: theſe organs are the throat, palate, tongue, teeth, lips, whence the five claſſes of conſonants are denominated guttural, palatal, lingual, dental, and labial.

The abbe Dangeau thinks the nature of the diviſion of the hebrew grammarians very reaſonable, but he does not acquieſce in the diſtribution they have made of them. In order to find a natural and juſt diviſion of the conſonants, he obſerves, no regard muſt be had to the characters that repreſent them, nor any thing to be conſidered but their ſound, or the modification they give the ſound. On this principle the ſame author finds in the french five labial conſonants *b*, *p*, *v*, *f*, *m*; five palatal ones, *d*, *f*, *g*, *k*, *n*; four hiſſers, *ſ*, *z*, *j*, *ch*; two liquids, *l* and *r*; two that mix with each other, *ll*, *gn*; and the *h* aſpirate. He adds, 1. That *m* and *n* are properly two naſal conſonants, the *m* ſounding like a *b* paſſed through the noſe, and the *n* like a *d* pronounced through the noſe. 2. That among the conſonants ſome are weak, others ſtrong; their difference conſiſting in this, that the former are preceded by a ſmall emiſſion of the voice, that ſoftens them, which the latter have not: the weak are *b*, *c*, *d*, *g*,

z, *j*; the ſtrong are *p*, *f*, *k*, *t*, *ſ*, *ch*: hence we may conclude that the exceſs of conſonants in one language above another only conſiſts in this, that there are more modifications of ſound eſtabliſhed in the one than in the other. For all men having the ſame organs, may form the ſame modifications; ſo that it is entirely owing to cuſtom, nothing to nature, that the Engliſh have not the ϑ of the Greeks, the *y* and ך of the Hebrews, the *ch* of the Germans, the *gn* of the French, the *gl* of the Italians, and the *ll* of the Welch. Alſo that the Chineſe have no *r*, the Iroquois no labial conſonants, the Hurons abundance of aſpirates, and the Arabs and Georgians abundance of double conſonants. Laſtly, to find all the conſonants that may be formed in any language, there needs nothing but to obſerve all the modifications that the ſounds of ſpeech will admit of, by which we ſhall have all the conſonants practicable.

CONSORT, or CONCERT, in muſic. See the article CONCERT.

Queen-CONSORT is ſaid in contradiſtinction to a ſovereign princeſs, or queen inveſted with ſupreme authority. See the article QUEEN.

CONSPIRACY, in law, ſignifies an agreemen between two or more, falſely to indict, or procure to be indicted, an innocent perſon of felony.

The puniſhment of a conſpiracy upon an indictment of felony at the king's ſuit, according to our old law, was, that the parties attainted ſhall loſe their frank law, whereby they become diſabled to be impanneled on juries, or to give evidence in court; that their lands, goods, and chattels ſhall be ſeized into the king's hands, and their bodies committed to priſon. At this day, fine and impriſonment is uſually inflicted, where one is found guilty on an indictment for conſpiracy.

A conſpiracy to maintain ſuits and quarrels, of victualiers to ſell their victuals at a certain price, and of labourers and artificers to raiſe their wages, is alſo puniſhable by ſtatute.

CONSPIRATORS are, by ſtatute, defined to be ſuch as bind themſelves by oath, covenant, or other alliance, to aſſiſt one another, falſely and maliciouſly to indict perſons, or falſely to maintain pleas. Likewiſe thoſe that retain men in the counties with liveries or fees, in order to ſupport their malicious enterpriſes, which extends as well to the takers as the givers, and to ſtewarts and bailiffs of lords, who, by their office or power, take upon them to maintain quarrels.

Conſpirators in treaſon are thoſe that plot againſt the king and government.

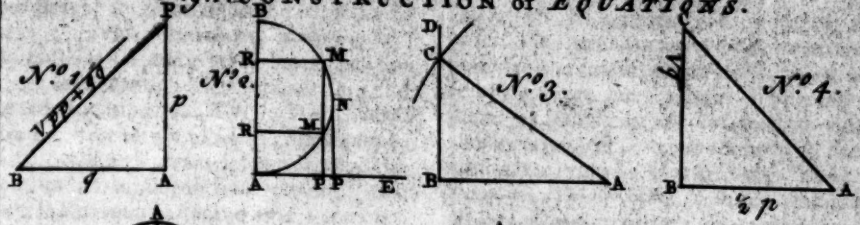
CONSPIRING POWERS, in mechanics, thoſe acting in directions not oppoſite. See the article POWER.

CONSTABLE. Lord high conſtable, an antient officer of the crowns both of England and France, whoſe authority was ſo very extenſive, that the office has been laid aſide in both kingdoms, except upon particular occaſions, ſuch as the king's coronation. The conſtable of France had his perſon privileged, and, during the king's minority, was named next to the princes of the blood. The army obeyed him next the king: he managed all that belonged to war, either for puniſhment of delinquents, diſtribution of booty, ſurrender of places, *&c.* The juriſdiction and functions of this office are now in the mareſchals of France.

The function of the conſtable of England conſiſted in the care of the common peace of the land, in deeds of arms and matters of war. By a law of Richard II. the conſtable of England has the determination of things concerning wars and blazonry of arms, which cannot be diſcuſſed by the common law. The firſt conſtable was created by the Conqueror: the office continued hereditary till the thirteenth of Henry VIII. when it was laid aſide, as being ſo powerful as to become troubleſome to the king. We have alſo conſtables denominated from particular places, as conſtable of the Tower, of Dover-caſtle, of Windſor-caſtle, of the caſtle of of Caernarvon, and many other of the caſtles of Wales, whoſe office is the ſame with that of the caſtellani, or governors of caſtles.

From the lord high conſtable are derived thoſe inferior ones, ſince called the conſtables of hundreds or franchiſes, who were firſt ordained in the thirteenth of Edward I, by the ſtatute of Wincheſter, which, for the converſation of peace and view of armour, appointed that two conſtables ſhould be choſen in every hundred. Theſe are what we now call high-conſtables, on account that the increaſe of people and offences has made it neceſſary to appoint others under theſe, in every town, called petty-conſtables, who are of the like nature, though of inferior authority to the other. The high conſtable over the whole hundred is uſually choſen and ſworn into his office by the juſtices of the

Fig. 1. CONSTRUCTION of *EQUATIONS*.



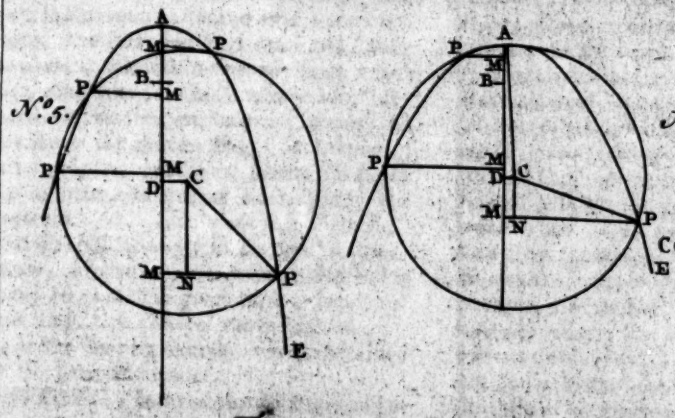
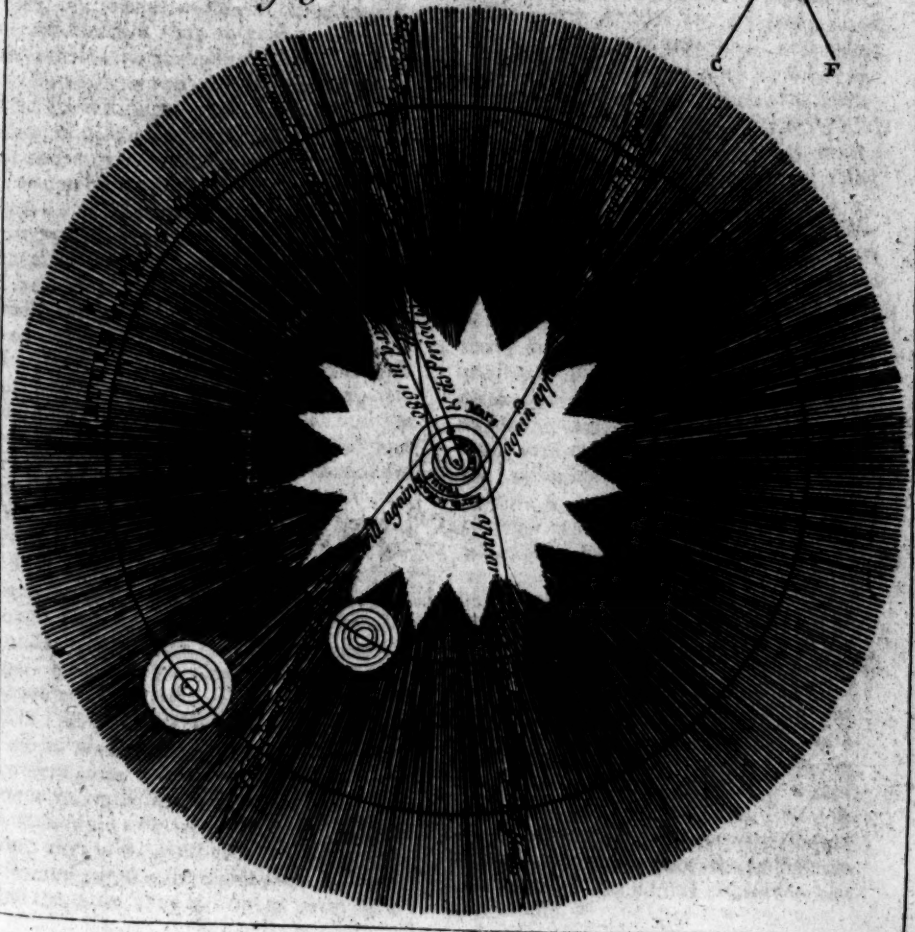


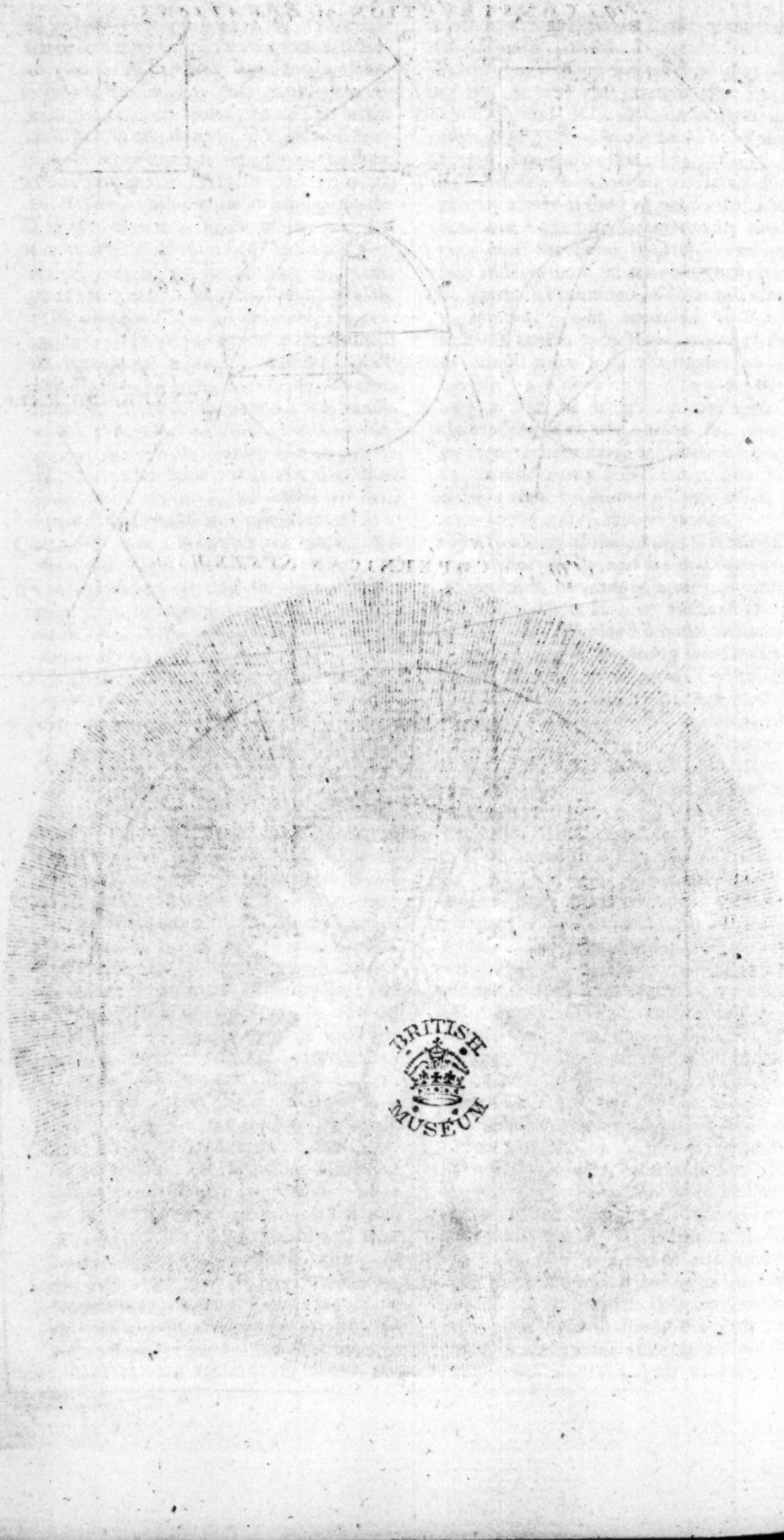
Fig. 2.
CONVERGING *RAYS*.



Fig. 3. COPERNICAN *SYSTEM*.



T. Jeffery's sculp.


BRITISH MUSEUM

the peace, in their ſeſſions: and as to petty-conſtables in towns, villages, &c. the right of chooſing them belongs to the court-leet, though they may be elected by the pariſhioners. They are appointed yearly, and ought to be men of honeſty, knowledge and ability; and if they refuſe to ſerve, or do not perform their duty, they may be bound over to the ſeſſions, and there indicted and fined. Any conſtable, without a warrant from a juſtice, may take into his cuſtody any perſons that he ſees committing felony, or breaking the peace; but if it be out of his ſight, as where a perſon is ſeized by another, he cannot do it without a warrant.

CONSTANCE, a city of Swabia, in Germany, ſituated on the weſtern ſhore of a lake, to which it gives name, in 9° 12′ eaſt long. and 47° 37′ north latitude.

It is the ſee of a biſhop, who is a prince of the german empire.

CONSTANT, in general, an appellation given to things which remain in the ſame ſtate, without changing their nature or circumſtances: thus we ſay, conſtant quantities, conſtant winds, &c. See the article QUANTITY, WIND, &c.

CONSTANTINA, the capital of a province of the ſame name, in the kingdom of Algiers, in Africa: eaſt longitude 7°, and north latitude 35° 30′.

CONSTANTINOPLE, the metropolis of the turkiſh empire, called by the Turks themſelves Stamboul, and by many Europeans the Port, being one of the beſt harbours in Europe: eaſt long. 29° 15′, and north lat. 41° 30′.

It is built on the weſtern ſhore of the Boſphorus, in the form of a triangle; the ſeraglio, or palace, occupying that angle which runs out between the Propontis and harbour; and underneath the palace are the gardens, which extend to the water-ſide.

CONSTAT, in law, a certificate, that the clerk of the pipe and auditors of the exchequer grant at the requeſt of any perſon who intends to plead or move in that court, for the diſcharge of any thing. A conſtat is ſuperior to an ordinary certificate, becauſe it contains nothing but what is evident on record.

CONSTELLATION, in aſtronomy, a ſyſtem of ſeveral ſtars that are ſeen in the heavens, near to one another. Aſtronomers not only mark out the ſtars, but, that they may better bring them into order, they diſtinguiſh them by their ſituation and poſition in reſpect to each other; and therefore they diſtribute them into aſteriſms, or conſtellations, allowing ſeveral ſtars to make up one conſtellation: and for the better diſtinguiſhing and obſerving them, they reduce the conſtellations to the forms of animals, as men, bulls, bears, &c. or to the images of ſome things known, as of a crown, a harp, a balance, &c. or give them the names of thoſe, whoſe memories, in conſideration of ſome notable exploit, they had a mind to tranſmit to future ages. The venerable Bede, indeed, out of a vain zeal, inſtead of the names and figures of the twelve conſtellations, or ſigns of the zodiac, ſubſtituted thoſe of the twelve apoſtles; Julius Schillerius, in 1627, completed the reformation, and gave ſcripture-names to all the conſtellations in the heavens. But as theſe innovations could ſerve no purpoſe, but that of introducing quarrels into aſtronomy, the old conſtellations are ſtill retained, both becauſe better could not be ſubſtituted, and likewiſe to keep up the greater correſpondence and uniformity between the old aſtronomy, and the new. The diviſion of the ſtars by images and figures is of great antiquity, and ſeems to be as old as aſtronomy itſelf; for in the moſt antient book of Job, orion, arcturus, and the pleiades are mentioned; and we meet with the names of many of the conſtellations in the writings of the firſt poets Homer and Heſiod.

The antients, in their diviſion of the firmament, took in only ſo much as came under their notice, diſtributing it into forty-eight conſtellations; but the modern aſtronomers comprehend the whole ſtarry firmament, dividing it into three regions: 1. The zodiac, or that portion of the heavens in which the planets would appear to move, to an eye placed in the ſun: the breadth of this ſpace depends on the inclination of the orbits, in which the planets move, to one another; and includes twelve conſtellations, commonly called the ſigns of the zodiac, *viz.* aries, taurus, gemini, cancer, leo, virgo, libra, ſcorpio, ſagittarius, capricornus, aquarius, and piſces. 2. All that region of the heavens that lies on the north ſide of the zodiac, which contains twenty-one conſtellations, namely the urſa minor and major, draco, cepheus, bootes, corona ſeptentrionalis, hercules, lyra, cygnus, caſſiopeia, perſeus, andromeda, triangulum, auriga, pegaſus, equuleus, delphinus, ſagitta, aquila, ſerpentarius, and ſerpens; to which were added afterwards two others, *viz.* that of antinous, which was made of the ſtars not included in

any

any image, near the eagle; and berenice's hair, conſiſting of ſtars which are near the lion's tail. 3. That region on the ſouthern ſide of the zodiac, which contains fifteen conſtellations, known to the antients, *viz.* cetus, the eridanus, lepus, orion, canis major, canis minor, argo, hydra, crater, corvus, centaurus, lupus, ara, corona meridionalis, and piſcis auſtralis: to theſe are lately added twelve more conſtellations, which are not to be ſeen by us, who inhabit the northern regions, becauſe of the convexity of the earth, but in the ſouthern parts they are very conſpicuous; theſe are the phœnix, grus, pavo, indus, avis paradiſi, triangulum auſtrale, muſca, chameleon, piſcis volans, toucan, hydrus, xiphias. The galaxy, or milky-way, is alſo to be reckoned among the conſtellations. See each conſtellation, and the number of ſtars it contains, under its proper head, ARIES, TAURUS, *&c.*

Without the compaſs of theſe conſtellations there are ſeveral ſtars which cannot be reduced to any of the forms mentioned, and theſe by the antients are called informes or ſporades, out of which ſome great aſtronomers have made new conſtellations, as Charles's heart, and Sobieſki's ſhield. See the articles INFORMIS and SPORADES.

CONSTIPATION, in medicine, a hardneſs of the belly, with great coſtiveneſs. Riding poſt, eating medlars, quinces, *&c.* and ſeveral preparations of milk, conſtipate the belly: and moſt perſons of a hot dry conſtitution are afflicted with a conſtipation; the proper remedy for which is a clyſter and lenient cathartics; but when theſe fail, other medicines of a more powerful nature muſt be adminiſtered.

CONSTITUENT PART, in phyſiology, an eſſential part in the compoſition of any thing, differing little from what is otherwiſe called element or principle. See the articles ELEMENT and PRINCIPLE.

CONSTITUTION, in matters of policy, ſignifies the form of government eſtabliſhed in any country or kingdom.

CONSTITUTION alſo denotes an ordinance, deciſion, regulation, or law, made by authority of any ſuperior, eccleſiaſtical or civil. The conſtitutions of the roman emperors make a part of the civil law, and the conſtitutions of the church make a part of the canon law. See the articles CIVIL LAW and CANON LAW.

CONSTITUTION, by way of eminence, is an appellation given to that bull of pope Clement XI. which begins with the word *Unigenitus*. See the article BULL.

Apoſtolical CONSTITUTIONS, a collection of regulations attributed to the apoſtles, and ſuppoſed to have been collected by St. Clement, whoſe name they likewiſe bear. It is the general opinion, however, that they are ſpurious, and that St. Clement had no hand in them. They appeared firſt in the IVth age, but have been much changed and corrupted ſince that time. They are divided into eight books, conſiſting of a great number of rules and precepts, relating to the duties of chriſtians, and particularly the ceremonies and diſcipline of the church. Mr. Whiſton, in oppoſition to the general opinion, aſſerts them to be a part of the ſacred writings, dictated by the apoſtles in their meetings, and wrote down from their own mouth by St. Clement, and intended as a ſupplement to the New Teſtament, or rather as a ſyſtem of chriſtian faith and polity. The reaſon why the conſtitutions are ſuſpected by the orthodox, and, perhaps, the reaſon alſo why their genuineneſs is defended by Mr. Whiſton, is, that they ſeem to favour arianiſm.

CONSTITUTION, in a phyſical ſenſe, is that particular diſpoſition of the human body, which reſults from the properties and mutual actions of the ſolids and fluids, and which renders them capable of exerciſing the functions proper and conformable to nature. An equal conſtitution is that wherein the four humours, blood, phlegm, bile, and melancholy, are mixed in a due proportion; and according as one or other of theſe predominates, the conſtitution is denominated ſanguine, phlegmatic, bilious, or melancholy and atrabilious. See TEMPERAMENT.

CONSTRICTION, the binding or drawing the parts of a thing cloſe together.

CONSTRICTOR, an appellation given to ſeveral muſcles on account of their conſtringing or cloſing ſome of the orifices of the body. Thus,

CONSTRICTOR LABIORUM, called alſo orbicularis, becauſe its fibres are of an arched figure, is a muſcle which conſtitutes the very ſubſtance of the lips, and draws them up as in kiſſing; whence it is alſo called baſiator and oſculatorius.

CONSTRICTOR NASI, a muſcle ariſing above the dentes inciſores of the upper jaw, and terminating in the alæ of the noſe. It is but ſingle, though Santorini will have it that it is double, and is not orbicular in human ſubjects as in many of

of the quadrupeds. Properly ſpeaking, indeed, there is in the human frame no ſuch muſcle as the conſtrictor orbicularis of beaſts, but this ſerves ſome degree in its office. The uſe is to draw the alæ downwards, and at the ſame time to draw the upper lip downwards, in which action it is very much aſſiſted by the conſtrictor of the lips.

CONSTRUCTION, in geometry, is the drawing ſuch lines, ſuch a figure, &c. as are previouſly neceſſary for the making any demonſtration appear more plain and undeniable.

CONSTRUCTION *of equations*, in algebra, the method of drawing a geometrical figure whoſe properties ſhall expreſs the given equation, in order to demonſtrate the truth of it geometrically.

Conſtruction of ſimple equations is performed by reſolving the fractions to which the unknown quantity is equal, into proportional parts. Thus if $\frac{da}{b}=x$, then it will be as $b:d::a:x$. Whence x will be determined by the method of finding a fourth proportional. Suppoſe the equation to be $\frac{ab+mn}{r-s}=x$, firſt find a mean proportional between a and b, which ſuppoſe to be p, alſo another mean proportional between m and n, which ſuppoſe to be q, then the equation will ſtand thus $\frac{pp+qq}{r-s}=x$. Which may be conſtructed in the following manner. Let the baſe AB (plate L. fig. 1. n°. 1.) of the right angled triangles APB be made equal to q, and the perpendicular AP equal to p; then will PB^2 be equal $pp+qq$, which according to the equation is to be divided by $r-s$. Therefore it will be as $r-s$: PB $(=\sqrt{pp+qq})$ :: PB to a third proportional, which will give x required.

CONSTRUCTION *of quadratic equations*. In order to render the conſtruction of quadratic equations more eaſy to be underſtood, it is neceſſary to ſhew the nature of curves of the ſecond order, which are made uſe of in conſtructing equations of this kind. See the article CURVE.

The general equation expreſſing the nature of the lines of the ſecond order, having all its terms and coefficients, will be in this form.

$$\left.\begin{matrix} y^2+axy+cx^2 \\ +\ by+dx \\ +\ e \end{matrix}\right\}=0$$

Where a, b, c, d, e repreſent any given quantities with their proper ſigns prefixed to them. If a quadratic equation is given, as $y^2+py+q=0$, and by comparing it with the preceding, you take the quantities a, b, c, d, e, and x ſuch, that $ax+b=p$, and $cx^2+dx+e=q$, then will the values of y in the firſt equation be equal to the values of it in the ſecond; and if the locus be deſcribed according to the firſt equation, the two values of the ordinate, when $ax+b=p$ and $cx^2+dx+e=q$, will be the two roots of the equation $y^2+py+q=0$. See LOCUS.

And as four of the given quantities a, b, c, d, e may be taken at pleaſure, and the fifth with the abſciſſe determined ſo, that $ax+b$ may be ſtill equal to p, and $cx^2+dx+e=q$; hence there are innumerable ways of conſtructing the ſame equation. But theſe loci are to be preferred which are deſcribed moſt eaſily; and therefore the circle of all conic ſections is to be preferred for the reſolution of quadratic equations.

Let AB (*ibid.* n°. 2.) be perpendicular to AE, and upon AB deſcribe the ſemicircle BMMA. If AP be ſuppoſed equal to x, AB$=a$, and PM$=y$, then making MR MR perpendiculars to the diameter AB, ſince AR $\times$ RB $=$ RM^2, and AR $=y$, RB $=a-y$, RM $=x$, it follows that $a-y\times y=x^2$, and $y^2-ay+x^2=0$. And if an equation $y^2-py+q=0$ be propoſed to be reſolved, its roots will be the ordinates to the circle, PM and PM, to its tangent AE, if $a=p$, and $x^2=q$: becauſe then the equation of the circle $y^2-ay+x^2=0$ will be changed into the propoſed equation $y^2-py+q=0$.

We have therefore this conſtruction for finding the roots of the quadratic equation $y^2-py+q=0$, take AB$=p$, and on AB deſcribe a ſemicircle: then raiſe AE perpendicular to AB, and on it take AP $=\sqrt{q}$, that is, a mean proportional between 1 and q (by 13 el. 6) then draw PM parallel to AB, meeting the ſemicircle in MM and the lines PM, PM ſhall be the roots of the propoſed equations.

It appears from the conſtruction that if $q=\frac{p^2}{4}$ or $\sqrt{q}=\frac{1}{2}p$, then AP$=\frac{1}{2}$AB, and the ordinate PN touches the curve in N, the two roots PM, PM in that caſe becoming equal to one another and to PN. If AP be taken greater than $\frac{1}{2}$AB, that is, when the $\sqrt{q}$ is greater than

than $\frac{1}{2}p$, or q greater than $\frac{1}{4}p$, the ordinates do not meet the circle, and the roots of the equation become imaginary.

The roots of the same equation may be otherwise thus determined. Take AB $=\sqrt{q}$, (*ibid.* n°. 3.) and raise BD perpendicular to AB; from A as a center with a radius equal to $\frac{1}{2}p$ describe a circle meeting BD in C, then the two roots of the equation $y^2-py+q=0$ shall be AC + CB, and AC − CB. For these roots are $\frac{1}{2}p+\sqrt{\frac{1}{4}p^2-q}$, and $\frac{1}{2}p-\sqrt{\frac{1}{4}p^2-q}$; and $AC=\frac{1}{2}p$ $CB=\sqrt{AC^2-CB^2}=\sqrt{\frac{1}{4}p^2-q}$, and consequently these roots are AC ± BC. The roots of the equation $y^2+py+q=0$ are −AC±CB. The roots of the equation $y^2-py-q=0$ are determined by this construction. Take AB $=\frac{1}{2}p$, BC $=\sqrt{q}$, (*ibid.* n°. 4.) draw AC, and the two roots shall be AB ±AC. If the second term is positive, then the roots shall be − AB ± AC. And all quadratic equations being reducible to these four forms,

$$y^2-py+q=0$$
$$y^2+py-q=0$$
$$y^2-py-q=0$$
$$y^2+py+q=0$$

it follows that they may all be constructed by this and the foregoing method.

CONSTRUCTION *of cubic and biquadratic equations.* The roots of any equation may be determined by the intersections of a straight line with a curve of the same dimensions as the equation, or by the intersections of any two curves, whose indices multiplied by each other, give a product equal to the index of the proposed equation. Thus the roots of a biquadratic equation may be determined by the intersections of two conic sections; for the equation by which the ordinates from the four points in which these conic sections may cut one another can be determined, will arise to four dimensions: and the conic sections may be assumed in such a manner, as to make this equation coincide with any proposed biquadratic: so that the ordinates from these four intersections, will be equal to the roots of the proposed biquadratic. If one of the intersections of the conic section falls upon the axis, then one of the ordinates vanishes, and the equation by which these ordinates are determined will then be of three dimensions only, or a cubic, to which any proposed cubic equation may be accommodated. So that the three remaining ordinates will be the three roots of that proposed cubic.

Those conic sections ought to be preferred for this purpose that are most easily described. They must not, however, be both circles; for their intersections are only two, and can serve only for the resolution of quadratic equations. Yet the circle ought to be one, as being most easily described, and the parabola is commonly assumed for the other. Their intersections are determined in the following manner. Let A P E be the common apollonian parabola, (*ibid.* n°. 5.) Take on its axis the line AB = half of its parameter. Let C be any point in the plane of the parabola, and from it, as a center, describe with any radius CP a circle meeting the parabola in P. Let PM, CD be perpendiculars on the axis in M and D, and let CN parallel to the axis meet PM in N. Then will always $CP^2=CN^2+NP^2$ (by 47 of Euclid, book I.). Put CP $=a$, the parameter of the parabola $=b$, AD $=c$, DC $=d$, AM $=x$, PM $=y$. Then $CN^2=\overbrace{x+c}^{2}$, $NP^2=\overbrace{y+d}^{2}$; and $\overbrace{x+c}^{2}+\overbrace{y+d}^{2}=a^2$. That is $x^2\pm 2cx+c^2+y^2\pm 2dy+d^2=a^2$. But from the nature of the parabola, $y^2=bx$, and $x^2=\frac{y^4}{b^2}$; substituting therefore these values for x^2 and x, it will be $\frac{y^4}{b^2}\pm\frac{2cy^2}{b}+y^2\pm 2dy+c^2+d^2-a^2=0$. Or multiplying by b^2, $y^4\pm\overline{2bc+b^2}\times y^2\pm 2d\overline{b^2}\times y+\overline{c^2+d^2-d^2}\times b^2=0$. Which may represent any biquadratic equation that wants the second term; since such values may be found for a, b, c, and d, by comparing this with any proposed biquadratic as to make them coincide. And then the ordinates from the points P, P, P, P, on the axis, will be equal to the roots of that proposed biquadratic; and this may be done though the parameter of the parabola, *viz.* b, be given: that is, if you have a parabola already made or given, by it alone you may resolve all biquadratic equations, and you will only need to vary the center of your circle and its radius.

If the circle described from the center (*ibid.* n°. 6.) pass through the vertex A, then $CP^2=CA^2=CD^2+AD^2$, that is $a^2=d^2+c^2$; and the last term

term of the biquadratic $(c^2 + d_2 - a^2)$ will vaniſh; therefore dividing the reſt by y, there ariſes the cubic $y^3 * \pm 2bc + b^2 \times y \pm 2db^2 = 0$.

Let the cubic equation propoſed to be reſolved be $y^3 * \pm py \pm r = 0$. Compare the terms of theſe two equations and you will have $\pm 2bc + b^2 = \pm p$, and $\pm 2db^2 = \pm r$, or $\mp c = \frac{b}{2} \mp \frac{p}{2b}$, and $d = \pm \frac{r}{2b^2}$. From which you have this conſtruction of the cubic $y^3 * \pm py \pm r = 0$, by means of any given parabola APE. From the point B, take in the axis (forward if the equation has $-p$, but backwards if p is poſitive) the line $BD = \frac{p}{2b}$; then raiſe the perpendicular $DC = \frac{r}{2b^2}$, and from C deſcribe a circle paſſing through the vertex A, meeting the parabola in P; ſo ſhall the ordinate PM be one of the roots of the cubic $y^3 * \pm py \pm r = 0$. The ordinates that ſtand on the ſame ſide of the axis with the center C, are negative or affirmative, according as the laſt term r is negative or affirmative; and thoſe ordinates have always contrary ſigns that ſtand on different ſides of the axis. The roots are found of the ſame value; only they have contrary ſigns when r is poſitive, to what they have when it is negative, the ſecond term of the equation being wanting.

We have now ſhewn how the roots of cubic and biquadratic equations may be conſtructed by the parabola and circle; but whoſoever is curious to know how other conic ſections may be determined, by whoſe interſections the ſame roots may be diſcovered, is deſired to conſult Mr. Maclaurin's Algebra, Renatus Sluſius in Meſolabium, De la Hire's Conſtruction des equations Analytiques, Sir Iſaac Newton at the end of his Algebra, Dr. Halley's Conſtruction of cubic and biquadratic equations, Mr. Colſon's in the Philoſophical Tranſactions, and De l'Hoſpital's Traité Analytique des Sections Coniques.

CONSTRUCTION, in grammar, the connecting the words of a ſentence according to the rules of the language.

Conſtruction is either ſimple or figurative, according as the parts of the diſcourſe are placed in their natural order; or recede from that ſimplicity, when ſhorter and more elegant expreſſions are uſed than the nature affords.

The conſtruction of words, called ſyntax, is diſtinguiſhed into two parts, concord and regimen. See SYNTAX, CONCORD, and REGIMEN.

CONSUALIA, in roman antiquity, a feſtival inſtituted by Romulus, who at the time of the rape of the Sabine virgins found an altar under ground dedicated to the god Conſus, that is Neptune. They were introduced with a magnificent cavalcade, and during the celebration, the horſes and aſſes were crowned with flowers, and a mule was ſacrificed to that god.

Servius ſays the conſualia fell on the 15th of Auguſt. Plutarch places them on the 18th, and the old roman calendar on the 21ſt of that month.

CONSUBSTANTIAL, among divines, a term denoting ſomething of the ſame ſubſtance with another. Thus the orthodox believe the ſon of God to be conſubſtantial with the father. The word ὁμοούσιος, conſubſtantial, was firſt adopted by the fathers of the councils of Antioch and Nice, to expreſs the orthodox doctrine more preciſely, and to ſerve as a barrier and precaution againſt the errors and ſubtilties of the Arians, who owned every thing except the conſubſtantiality.

CONSUBSTANTIATION, a tenet of the lutheran church with regard to the manner of the change made in the bread and wine in the euchariſt.

The divines of that profeſſion maintain, that after conſecration, the body and blood of our Saviour are ſubſtantially preſent, together with the ſubſtance of the bread and wine which is called conſubſtantiation or impanation. See the articles LUTHERANS and IMPANATION.

CONSUETUDINIBUS and SERVITIIS, in law, is a writ which lies againſt a tenant that deforces a lord of the rent and ſervice due.

CONSUL, the chief magiſtrate of the roman commonwealth. They were two in number, choſen every year in the campus martius, by the people aſſembled in the comitia centuriata. In the firſt times of the commonwealth, no man could pretend to this dignity, but ſuch as were of a patrician family; but afterwards the people obtained, that one of the conſuls ſhould be choſen from among them. A conſul was commonly choſen at 43 years of age, but this was not always obſerved: beſides, it was requiſite he ſhould have

exerciſed other offices, as that of quæſtor, ædile and pretor; and yet this condition was no better obſerved than the firſt; for Pompey had never been pretor nor quæſtor when he obtained the conſulſhip.

Their authority and power was of very great extent, ſo long as the commonwealth ſubſiſted. They were the head of the ſenate; they commanded the armies, and were ſupreme judges of the differences between the citizens; but as they had made ſome abuſe of this power, it was allowed by the valerian law for the party aggrieved to appeal from their tribunal to the people, eſpecially in caſes where the life of a citizen was concerned.

Under the emperors, conſul was little more than an honourable title, and at laſt it became abſolutely extinct in the time of Juſtinian. From the eſtabliſhment of the republic to the conſulate of Baſil, that is, from the year of Rome 244, to the year of Rome 1294, the years were accounted by the conſuls; but after that period, the time was computed by the years of the emperors reigns and the indictions.

In the middle age, we find the word conſul uſed for comes, and proconſul or viconſul, for viſcount, as is obſerved by Spelman and De Marca. See the article COUNT.

CONSUL, at preſent, is an officer eſtabliſhed by virtue of a commiſſion from the king and other princes, in all foreign countries of any conſiderable trade, to facilitate and diſpatch buſineſs, and protect the merchants of the nation. The conſuls are to keep up a correſpondence with the miniſters of England reſiding in the courts whereon their conſulate depends. They are to ſupport the commerce and the intereſt of the nation; to diſpoſe of the ſums given and the preſents made to the lords and principals of places, to obtain their protection, and prevent the inſults of the natives on the merchants of the nation.

By the treaty of Utrecht between Great Britain and Spain, the conſul reſiding in the king of Spain's dominions ſhall take inventories of the eſtates of the Engliſh dying inteſtate in Spain; and theſe eſtates ſhall be intruſted with two or three merchants, for the ſecurity and benefit of the proprietors and creditors.

The ſtatute of 9 Geo. II. enacts, that it ſhall be lawful for perſons appointed by the conſuls at the ports of Cadiz and St. Mary's in Spain, with the majority of the britiſh factors and merchants there, to receive from all britiſh and iriſh ſhips trading there, any ſums of money not exceeding one rial plate per ducat on the freight of goods and merchandize there imported, and on all tonnage goods not exceeding two rial plates per ton, and all their bills of lading ſhall ſpecify to pay the ſame under denomination of contribution. And all britiſh and iriſh commanders trading to the ſaid ports, and delivering there, ſhall, within ten days after their arrival, deliver a manifeſto upon oath, ſpecifying the particulars of the cargo, and to whom conſigned; which oath is to be adminiſtered by the conſul, or whom he ſhall appoint, and the clearances outwards detained by him till payment of the money is made; and any departing without his clearances, the conſul, on ſuch maſter's return to any port in the king's dominions, may have an action at law againſt him for the ſaid money. All monies raiſed to be applied to the relief of ſhipwrecked mariners or other diſtreſſed perſons his majeſty's ſubjects, and other charitable uſes, are appointed by the conſul.

CONSULS in France, are judges elected among merchants in ports and trading towns, to terminate, gratis and on the ſpot, ſuch differences as may ariſe relating to merchandizes, bills of exchange, and other articles of commerce. The qualifications neceſſary for obtaining the conſulſhip at Paris, and in ſeveral other places, are, 1. To have been, or to be actually a merchant. 2. To be a native of the kingdom. 3. To be an inhabitant of that city. 4. To be of an unblemiſhed character.

CONSULAR, ſomething belonging to a conſul. See the article CONSUL.

CONSULTATION, in law, a writ by which a cauſe being removed from the ſpiritual court to the king's court, is returned thither again; and the reaſon is, that if the judges of the king's court, by comparing the libel with the ſuggeſtion of the party, find the ſuggeſtion falſe or not proved, and on that account the cauſe to be wrongfully called from the eccleſiaſtical court, then upon this conſultation or deliberation they decree it to be returned. This writ is in the nature of a procedendo; yet properly a conſultation ought not to be granted, only in caſe where a perſon cannot recover at the common law. In cauſes of which the eccleſiaſtical and ſpiritual courts have juriſdiction, and

and they are not mixed with any temporal thing; if ſuggeſtion is made for a prohibition, a conſultation ſhall be awarded. See the article PROHIBITION.

CONSUMMATION, the end or completion of a work. Thus we ſay, the conſummation of all things, meaning the world.

Conſummation of marriage, the laſt act of marriage which makes its accompliſhment, or the moſt intimate union between the married pair.

CONSUMPTION, in medicine, a word of very extenſive ſignification, implies all diſorders that bring any decay or waſte upon the conſtitution.

Phyſicians divide it into ſeveral kinds, according to the variety of its cauſes, as univerſal or ſcorbutic conſumption, where it ariſes from a cacochymia or ſcorbutic habit; and pulmonic conſumption, where it ariſes from ſome cauſe in the lungs, properly called a phthiſis. See the articles SCURVY and PHTHISIS.

A conſumption may either be hereditary, natural, or accidental. In the firſt caſe, the taint is originally fixed in the conſtitution of the embryo, and interwoven with its firſt principles of life. A natural conſumption may proceed from the ſtraitneſs of the thorax, or a particular ill formation in ſome of the principal viſcera; and the laſt ſpecies, called alſo ſymptomatic conſumptions, derive their origin, or in ſome ſort depend upon various diſtempers; as, 1. A conſumption ariſing from a gonorrhœa, or a fluor albus, if it be confirmed, and hath been of a long ſtanding, is very difficult to cure: if it be recent, the running is to be ſtopped with great caution; and the hectical heats, if any, are to be allayed by means of a milk diet, or the chalybeate mineral waters. 2. A conſumption from abſceſſes and ulcers, in which caſe the ulcer muſt be ſeaſonably healed with the uſe of internals as well as externals; internal balſamics muſt be preſcribed, and the greateſt care taken after the cure of the ulcer, leſt a pulmonary conſumption ſhould follow, wherefore iſſues are to be made, and the uſe of balſamics continued, with a milk diet and mineral waters. 3. A conſumption from giving ſuck. The infant is to be weaned in time, and the nurſe to uſe a diet that yields good nouriſhment; and if a hectic diſpoſition requires it, a milk diet and chalybeate waters. 4. A ſcrophulous conſumption, which is known by the glandulous tumours in the outward parts of the body, and from the frequent returns of ſore eyes and the itch. For the cure, unleſs there is an obſtruction of the liver attended with a dropſy, chalybeate waters muſt be drank a conſiderable time in ſummer. In winter, gums and balſamics muſt be taken; and in the ſpring, a diet-drink with millepedes and antiſcrophulous and pectoral ingredients. Opiates ſhould not be given but in caſes of neceſſity. 5. A ſcorbutic conſumption, the principal diagnoſtics of which are an eruption of ſpots diſpoſed here and there throughout the whole ſkin, almoſt a continual diſcharge of a viſcid ſaline pus from the jugular glands, eſpecially in the morning; and an exulceration and extenuation of the jaws. The cure of this diſeaſe differs from the general method in the following particulars. Opiates are always noxious: the pectoral medicines ſhould be ſuch as incide and cleanſe: they ſhould likewiſe be blended with antiſcorbutics, as water-creſſes, &c. and ſteel is alſo uſeful, unleſs the diſeaſe is too far advanced. 6. An aſthmatic conſumption, for which there is nothing better than a fine, thin, wholeſome air; and when this diſeaſe proceeds from a convulſive aſthma, hartſhorn drops will be beneficial. 7. A conſumption proceeding from hypochondriac and hyſteric affections, in which, beſides the general method of cure, antihyſterics muſt be given. 8. A conſumption proceeding from the green ſickneſs, and a ſuppreſſion of the menſes, with many others, as a conſumption from a diarrhœa, a dyſentery, a diabetes, a ſalivation, a dropſy, &c. which have nothing peculiar in the manner of their cure but what relates to the primary diſeaſes and a phthiſis in general. See the articles PHTHISIS, DIARRHOEA, DIABETES, &c.

CONTACT, is when one line, plane, or body is made to touch another, and the parts that do thus touch, are called the points or places of contact. The contact of two ſpherical bodies, and of a tangent with the circumference of a circle, is only in one point.

CONTAGION, in phyſic, the communicating a diſeaſe from one body to another. In ſome diſeaſes it is only affected by an immediate contact or touch, as the venom of the pox; in others it is conveyed by infected cloaths, as the itch; and in others it is tranſmitted through the air at a conſiderable diſtance, by means

of ſteams or effluvia expiring from the ſick, as in the plague and other peſtilential diſorders, in which caſe the air is ſaid to be contagious; that is, full of contagious particles. See the articles PLAGUE, POISON, &c.

CONTEMPLATION, an act of the mind, whereby it applies itſelf to conſider and reflect upon the works of God, nature, &c.

Contemplation among myſtic divines, is defined a ſimple, amorous view of God as preſent to the ſoul; and is ſaid to conſiſt in acts ſo ſimple, ſo direct, ſo uniform and peaceful, that there is nothing for the mind to take hold of whereby to diſtinguiſh it.

CONTEMPORARY, a perſon or thing that exiſted in the ſame age with another. Thus Socrates, Plato, and Ariſtophanes were contemporaries.

CONTENEMENT, in our old law-books, a term of different import; being ſometimes uſed for credit, or countenance; and, at other times, for the maintenance proper for each perſon, according to his rank and condition in the commonwealth.

CONTENT, in geometry, the area or quantity of matter or ſpace included in certain bounds.

The content of a tun of round timber is 43 ſolid feet. A load of hewn timber contains 50 cubic feet: in a foot of timber are contained 1728 cubic or ſquare inches; and as often as 1728 inches are contained in a piece of timber, be it round or ſquare, ſo many feet of timber are contained in the piece.

For the contents of cylindrical veſſels, and veſſels of other figures, ſee the article GAUGING.

CONTENTIOUS JURISDICTION, in law, denotes a court which has power to decide differences between contending parties.

The lords-juſtices, judges, &c. have a contentious juriſdiction; but the lords of the treaſury, the commiſſioners of the cuſtoms, &c. have none, being merely judges of accounts and tranſactions.

CONTESSA, a port town of Turky in Europe, in the province of Macedonia, ſituated on a bay of the Archipelago, about 200 miles weſt of Conſtantinople: eaſt long. 25°, and north lat. 41°.

CONTEXT, among divines and critics, that part of ſcripture or of a writing that precedes and follows the next. See the article TEXT.

In order to have the full ſenſe of the text, the context ſhould be regarded.

CONTI, a town of Picardy, in France, about fifteen miles ſouth-weſt of Amiens: eaſt long. 2° 20′, north lat. 49° 40′.

CONTIGNATION, in the antient architecture, the art of laying rafters together, and particularly flooring. See the articles FLOOR and RAFTERS.

CONTIGUITY, in geometry, is when the ſurface of one body touches that of another.

CONTIGUOUS ANGLES, in geometry, are ſuch as have one leg common to each angle, and are ſometimes called adjoining angles, in contradiſtinction to thoſe produced by continuing their legs through the point of contact, which are called oppoſite or vertical angles. See ANGLE.

The ſum of any two contiguous angles, is always equal to two right angles.

CONTINENT, in general, an appellation given to things continued without interruption; in which ſenſe we ſay, continent fever, &c. See the article FEVER.

CONTINENT, in geography, a great extent of land not interrupted by ſeas, in contradiſtinction to iſland, peninſula, &c.

According to what relations we have of the diſpoſition of the globe from late navigators, we may count four continents, of which there are but two well known. The firſt, called the antient continent, comprehends Europe, Aſia, and Africa. The ſecond is the new continent, called America. The third, which is called the northern or arctic continent, comprehends Greenland, the lands of Spitzberg, Nova Zembla, and the lands of Jeſſo. The fourth comprehends New Guinea, New Zealand, New Holland, and ſeveral others hitherto little known. Some authors think the two firſt continents are in reality only one, imagining the northern parts of Tartary to join with thoſe of north America.

CONTINENT *cauſe of a diſtemper*, that upon which the diſeaſe depends ſo immediately, that it continues ſo long as that remains, and no longer.

CONTINGENT, ſomething caſual or uncertain. Hence future contingent, in logic, denotes a conditional event which may or may not happen, according as circumſtances fall out. The Socinians maintain, that God cannot foreſee future contingents, becauſe depending on the free motions of the will of man.

CONTINGENT is alſo a term of relation for the quota that falls to any perſon upon a diviſion. Thus each prince in Germany, in time of war, is to furniſh ſo many men,

then, ſo much money and munition for his contingent.

CONTINGENT USE, in law, is an uſe limited in a conveyance of lands which may or may not happen to veſt, according to the contingency mentioned in the limitation of the uſe. And a contingent remainder, is when an eſtate is limited to take place at a time to come, on an uncertain event.

CONTINGENT LINE, in dialling, is a line that croſſes the ſubſtyle at right angles. See SUBSTYLAR and DIALLING.

CONTINGENTS are ſometimes uſed by mathematicians in the ſame ſenſe as tangents. See the article TANGENT.

CONTINUAL CLAIM, in law, a claim that is made from time to time within every year and a day to lands, &c. which in ſome reſpect one cannot attain without danger.

CONTINUANCE, in law, is the continuing of a cauſe in court by an entry made for that purpoſe upon the records there.

CONTINUANCE *of a writ or action*, is its continuing in force from one term to another, where the ſheriff has not returned a former writ iſſued out in the ſame action. With reſpect to continuances, the court of king's bench is not to enter them on the roll till after iſſue or demurrer, and then they enter the continuance of all on the back, before judgment.

CONTINUANDA ASSISA. See ASSISA.

CONTINUANDO, a term uſed in a ſpecial declaration of treſpaſs, where the plaintiff would recover damages for ſeveral treſpaſſes in one and the ſame action. To avoid multiplicity of ſuits, a perſon may in one action of treſpaſs, recover damages for many treſpaſſes committed, by laying the ſame to be done with a continuando.

CONTINUANDO PROCESSUM. See the article PROCESSUM.

CONTINUATION *of motion*. See the articles MOTION and PROJECTILE.

CONTINUATO, in muſic, ſignifies, eſpecially in vocal muſic, to continue or hold on a ſound in an equal ſtrength or manner, or to continue a movement in an equal degree of time all the way.

CONTINUED FEVER, a fever attended with exacerbations and ſlight remiſſions, but no intermiſſions.

CONTINUED PROPORTION, in arithmetic, is that where the conſequent of the firſt ratio is the ſame with the antecedent of the ſecond; as 4 : 8 :: 8 : 16, in contradiſtinction to diſcrete proportion. See the article DISCRETE.

CONTINUED *thorough baſs*, in muſic, that which continues to play conſtantly, both during the recitatives, and to ſuſtain the chorus. See the article CHORUS.

CONTINUITY, is defined by ſome ſchoolmen the immediate coheſion of parts in the ſame quantum; by others, a mode of body whereby its extremities become one; and by others, a ſtate of body reſulting from the mutual implication of its parts. There are two kinds of continuity, mathematical and phyſical. The firſt is merely imaginary, ſince it ſuppoſes real or phyſical parts where there are none. Phyſical continuity is that ſtate of two or more particles, in which their parts are ſo mutually implicated, as to conſtitute one uninterrupted quantity or continuum. The ſchoolmen again divide it into two other ſorts of continuity, as, 1. Homogeneous continuity, that where our ſenſes cannot perceive the bounds or extremes of the parts; and this agrees to air, water, metals, &c. 2. Heterogeneous continuity, where the extremities of certain parts are indeed perceived by the ſenſes, yet, at the ſame time, the parts are obſerved to be linked cloſely to each other, either in virtue of their ſituation or figure, &c. and this is chiefly attributed to the bodies of plants and animals.

In medicine and ſurgery, wounds, ulcers, fractures, &c. are expreſſed by the phraſe ſolutio continui, or ſolution of continuity.

CONTINUO, in muſic, ſignifies the thorough baſs, as baſſo continuo is the continual or thorough baſs, which is ſometimes marked in muſic books by the letters B. C.

CONTINUO is alſo a ſpecies of harmony or mode, mentioned by Julius Pollux, and which, ſays Zarlin, anſwers to the perpetual burden of our bagpipes, which now and then muſt be harmonious.

CONTORSION, in medicine, has many ſignifications. 1. It denotes the iliac paſſion. 2. An incomplete diſlocation, when a bone is in part, but not intirely, forced from its articulation. 3. A diſlocation of the vertebræ of the back ſideways, or a crookedneſs of theſe vertebræ. And, 4. A diſorder of the head, in which it is drawn towards one ſide, either by a ſpaſmodic contraction of the muſcles on the ſame ſide, or a palſy of the antagoniſt muſcles on the other.

CON-

CONTOUR, in painting, the out-line, or that which defines a figure.

A great part of the ſkill of the painter lies in managing the contours well. Contour, with the italian painters, ſignifies the lineaments of the face.

CONTOURNE, in heraldry, is uſed when a beaſt is repreſented ſtanding or running with its face to the ſiniſter ſide of the eſcutcheon, they being always ſuppoſed to look to the right, if not otherwiſe expreſſed.

CONTOURNIATED, a term among antiquaries applied to medals, the edges of which appear as if turned in a lathe. This ſort of work ſeems to have had its origin in Greece, and to have been deſigned to perpetuate the memories of great men, particularly thoſe who had bore away the prize at the ſolemn games. Such are thoſe remaining of Homer, Solon, Euclid, Pythagoras, Socrates, and ſeveral athletæ.

CONTRA FORMAM COLLATIONIS, a writ that lies to recover lands which being given in perpetual alms to a religious houſe, hoſpital, ſchool, or the like, have been alienated by the governors or managers.

CONTRA FORMAM FEOFFAMENTI, is a writ which lies for the heir of a perſon enfeoffed of lands or tenements, who is diſtrained by the lord for more ſervices than are contained in the charter of feoffment.

CONTRABAND, in commerce, a prohibited commodity, or merchandiſe bought or ſold, imported or exported, in prejudice to the laws and ordinances of a ſtate, or the public prohibitions of the ſovereign. Contraband goods are not only liable to confiſcation themſelves, but alſo ſubject all other allowed merchandiſe found with them in the ſame box, bale or parcel, together with the horſes, waggons, &c. which conduct them. There are contrabands likewiſe, which, beſides the forfeiture of the goods, are attended with ſeveral penalties and diſabilities.

The principal goods prohibited to be imported into Great Britain, are * alamodes and luſtrings, except in the port of London, and by licenſe; * ammunition without licence from the king; * arms, without licence from the king; * beef; bits for bridles; * popiſh books; brandy in caſks leſs than 60 gallons, or in ſhips leſs than 15 tuns burden; * buttons of all ſorts; printed, painted, ſtained or dyed callicoes; cards for wool, and playing cards; * cattle; chocolate ready made, or cocoa paſte; cinnamon, without licence, except from India; * woolen cloths; cloves, without licence, except from India; * cheeſe and butter from Ireland; dice; eaſt-india, perſia, and china wrought ſilks, bengals, ſtuffs mixed with ſilk, or herba, except into the port of London, and under ſpecial regulations; fiſh of all ſorts taken by foreigners, and imported in foreign ſhips, except ſtock-fiſh, live eels, ſturgeon, botargo or cavier, and anchovies; * fringes of ſilk or thread; gold or ſilver thread, lace, fringe, or other works made thereof; * malt from beyond ſea; * mutton; ſalt in ſhips under twenty tun or not in bulk; * ſheep; ſilk embroidered, raw, and mohair yarn, of the product or manufacture of Aſia, from any ports or places on the Streights or Levant ſeas, except ſuch as are within the dominions of the grand ſignior; thrown ſilk, except from Italy, Naples, or Sicily; twined ſilk; * wrought ſilk mixed with gold, ſilver, or other materials; * ſwine; tea, except from the place of its growth; all tobacco-ſtalks and ſtems; all tobacco, wine, brandy, eaſt-india or other commodities, other than the growth or manufacture of the iſle of Man, prohibited to be brought from thence into Great Britain or Ireland, on any preſence whatſoever; * utenſils of war, without licence from the king; * cut whaſebone; wire of iron or lattin for wool; cards and all iron wire ſmaller than fine and ſuperfine, and all wares made of iron wire.

Goods prohibited to be exported, are boxes, caſes or dial-plates for clocks and watches without the movement and makers names; bullion, without proper certificates, oaths, &c. frames for ſtockings; raw hides; unwrought horns; metal not of britiſh ore, except copper-bars; wool; ſcowring and fullers clay; ſheep and ſheepſkins with the wool; tallow; utenſils uſed in the ſilk and woolen manufactory; white aſhes, &c.

N. B. Such goods in the foregoing liſt as have an afteriſk prefixed before them, beſides the forfeiture in common with the reſt, are attended with ſeveral penalties.

CONTRACT, in a general ſenſe, a mutual conſent of two or more parties, who voluntarily promiſe and oblige themſelves to do ſomething, pay a certain ſum, or the like. All donations, exchanges, leaſes, &c. are ſo many different contracts.

CON-

CONTRACT, in common law, an agreement or bargain between two or more perſons with a legal conſideration or cauſe; as where a perſon ſells goods, *&c.* to another for a ſum of money; or covenants, in conſideration of a certain ſum, or an annual rent, to grant a leaſe of a meſſuage, *&c.*

Theſe are good contracts in law, becauſe there is one thing in conſideration for another: but if a perſon promiſes to give or pay 20 s. which afterwards, on being demanded, he refuſes to pay, no action lies to recover it; becauſe ſuch a promiſe will not amount to a contract, it being no more than a bare promiſe, termed in law *nudum pactum*: yet, if any thing was given in conſideration of ſuch a promiſe, were it but to the value of a penny, it is deemed a good contract, and conſequently will be binding. In contracts the time is to be regarded, in and from which they are made; and there is a difference where a day of payment is limited thereon, and where not: for when it is limited, the contract is good preſently, and an action lies on it without payment; but, in the other caſe, it is otherwiſe.

Uſorious CONTRACT, is an agreement to pay more intereſt for money than the laws allow.

It is a devaſtavit in executors to pay a debt upon an uſorious contract. In marriage, the romaniſts diſtinguiſh the civil contract, which is the conſent of the parties, from the ſacrament, which is the benediction of the prieſt: thoſe contracts are ſaid to be null and void, which the law prohibits the making of.

CONTRACT is alſo uſed for the inſtrument in writing which ſerves as a proof of the conſent granted, and the obligation paſſed between the parties.

CONTRACTILE FORCE, that property or power inherent in certain bodies, whereby, when extended, they are enabled to draw themſelves up again to their former dimenſions.

CONTRACTION, in grammar, is the reducing of two ſyllables into one, as *can't* for *cannot*, *ſhould'ſt* for *ſhouldeſt*, &c. The greek language, both in its verbs and nouns, abound in contractions, as ποιέω is contracted into ποιῶ, ποιέω, contracted into ποιεῖ, *&c.*

The french language has in its pronunciation, at leaſt, ſomething like it, as when they pronounce *ſaouler*, *baailler*, *paon*, &c. in this manner, *ſouler*, *bailler*, *pan*, &c.

CONTRACTION, in logic, a ſort of reduction, whereby things are abridged or brought into leſs compaſs.

The uſe of contraction is to bring things, that before were too lax and diffuſive, nearer together, ſo that their mutual relation may appear the more diſtinct, and that they may ſtrengthen and ſupport one another the better: thus, in the following argumentation, *Ex iſta enunciatione, ergo nunc ſum ſtans, ſequitur iſta enunciatio, ergo nunc ſum exiſtens: id eſt, ex ſto ſequitur ſum.* Or in engliſh thus, *From the propoſition, therefore now I am ſtanding, follows this other, therefore now I am exiſting*; which may be contracted into, *Standing implies exiſting.*

To this head are referred the arguments of poems and orations, the titles and ſummaries of chapters, *&c.*

CONTRACTION, in phyſics, the diminiſhing the extent or dimenſions of a body, or the cauſing its parts to approach nearer to each other, in which ſenſe it ſtands oppoſed to dilatation or expanſion. See the article DILATATION and EXPANSION.

Hence contraction is frequently uſed by anatomiſts, to expreſs the ſhrinking up of a fibre, or an aſſemblage of fibres, when extended. As paralytic diſorders generally proceed from too great a laxneſs of the fibres in the part affected; ſo, on the other hand, convulſions and ſpaſms proceed from a preternatural contraction of the muſcles of the part convulſed. See the articles MUSCLE and FIBRE.

CONTRADICTION, a ſort of direct oppoſition, wherein one thing is found directly contrary to another.

It is uſually defined in the ſchools, *oppoſitio inter ens & non-ens, medio carens*; where by *ens & non-ens*, are meant any two extremes, one whereof affirms and the other denies; and it is ſaid to be *medio carens*, in order the better to diſtinguiſh it from other ſpecies of oppoſitions: for the extremes here neither agree in ſubject, as is the caſe in form and privation, nor in eſſence and kind, as in contrariety. See the article CONTRARIETY.

CONTRADICTORY, in a legal ſenſe, a perſon that has a title to contradict or gainſay.

An inventory of the goods of a minor ſhould be made in preſence of his guardian, or truſtee, he being the legal contradictor. A decree againſt a farmer has no effect on the landlord, the firſt not being the legitimate contradictor.

CONTRADICTORY PROPOSITIONS, in logic,

gic, are ſuch as differ both in quality and quantity, one being univerſal, and the other particular, which conſtitutes the oppoſition of quantity; one affirmative and the other negative, which makes the oppoſition in quality: thus, A. *Every vine is a tree.* O. *Some vine is not a tree.* Theſe can never be both true, and both falſe at the ſame time. To this it is neceſſary that the one deny, and the other affirm, the ſame thing of the ſame ſubject, conſidered in the ſame circumſtances, every thing having always its own eſſence. This logicians expreſs by *affirmare & negare idem, de eodem ſecundum idem.* If two univerſals differ in quality, they are contradictory; as, A. *Every vine is a tree.* E. *No vine is a tree.* Thoſe can never be both true together, but they may be both falſe. If two particular propoſitions differ in quality only, they are ſub-contradictory; as, J. *Some vine is a tree.* O. *Some vine is not a tree.* Theſe may be both true together, but they can never be both falſe. There are likewiſe contradictory propoſitions on an individual, which are called ſingle contradictories; as, *Peter is juſt, Peter is not juſt.* Now in ſuch as theſe, Peter muſt be conſidered at the ſame time, without which they may be both true; ſince there was a time wherein Peter was juſt, and wherein he was not.

Seeming contradictories is when the members of a period quite diſagree in appearance and ſound, but perfectly agree and are conſiſtent in ſenſe: thus,

"Cowards die many times before their death;
"The valiant never taſte of death but once." *Shakeſpear.*

CONTRA-FISSURE, in ſurgery, a kind of fracture, or fiſſure, in the cranium, which ſometimes happens on the ſide oppoſite to that which received the blow; or, at leaſt, at ſome diſtance from it.

The moſt certain ſymptoms of a contra-fiſſure are vehement pains, vomitings, vertigo, noiſe in the ears, &c. If theſe happen, and no fracture or depreſſion of the cranium be found, where the wound was received, there is a ſuſpicion of a contra-fiſſure, eſpecially if the patient is apt to point to that part.

If the ſymptoms be by intervals, or not to a great degree, or there be reaſon to believe the fiſſure to have reached only thro' one of the tables, it is ſufficient to bore down to the diploë, and dreſs with balſamic medicines: but where any violent ſymptoms come on, which demonſtrate an extravaſation of blood in the cavity of the cranium, the trepan is to be called for without delay. See TREPAN.

CONTRA-HARMONICAL PROPORTION, in arithmetic, is that relation of three terms, wherein the difference of the firſt and ſecond is to the difference of the ſecond and third as the third is to the firſt: thus, 3, 5, and 6 are numbers contra-harmonically proportional, for 2 : 1 :: 6 : 3.

CONTRA-INDICATION, in medicine, an indication which forbids that to be done, which the main ſcope of a diſeaſe points out: as if, in the cure of a diſeaſe, a vomit was judged proper; if the patient be ſubject to a vomiting of blood, it is a ſufficient contra-indication as to its exhibition. See INDICATION.

CONTRALTO, in muſic, a term uſed by the Italians for two haut contres, becauſe they play contrary to each other. See the article HAUT CONTRE.

CONTRAMANDATIO *placiti*, in antient law-books, ſeems to ſignify a reſpiting, or giving the defendant further time to anſwer; or an imparlance, or countermanding what was formerly ordered.

CONTRAMANDATUM is ſaid to ſignify a lawful excuſe, which the defendant in any ſuit, by his attorney, alledges for himſelf, to ſhew that the plaintiff has no reaſon to complain.

CONTRAMURE, in fortification, is a wall built before another partition-wall, to ſtrengthen it, ſo that it may receive no damage from the adjacent buildings. See WALL and RAMPART.

CONTRAPOSITION, among logicians, the ſame with converſion. See the article CONVERSION.

CONTRARIETY, an oppoſition between two things, which imports their being contrary to one another; and conſiſts in this, that one of the terms implies a negation of the other, either mediately, or immediately; ſo that contrariety may be ſaid to be the contraſt, or oppoſition of two things, one of which imports the abſence of the other, as love and hatred.

CONTRARY, a poſitive oppoſite, which, ſubſiſting by turns in the ſame ſubject with its oppoſite, is as remote from it as poſſible, expels it, and is mutually expelled by it. Blackneſs and whiteneſs, cold and heat, are ſuch contraries. Hence qualities alone can, ſtrictly ſpeaking,

ing, be contraries; contrariety, in effect, only agreeing to qualities *per ſe*: to other things it agrees *per accidens*.

Contrary is, however, often uſed in a more extenſive and general ſenſe, that is, for any oppoſition or difference between the nature of things. It is a maxim in philoſophy, that *contraria juxta ſe poſita eluceſcunt*; i. e. that contraries ſet off one another.

CONTRARY, in rhetoric. F. de Colonia lays down three kinds of contraries in oratory, *viz.* adverſatives, privatives, and contradictories. Adverſatives are thoſe that differ much in the ſame thing, as virtue and vice, war and peace, as in this of Cicero, *Si ſtultitium fugimus, ſapientiam ſequamur*; *& bonitatem, ſi malitiam*; and in this of Quintilian, *Malorum cauſa bellum eſt, erit emendatio pax.*

Drances, in Virgil, argues thus, *Nulla ſalus bello*; *pacem te poſcimus omnes.* Privatives are habits, and their privations.

Contradictories are thoſe, one whereof affirms, and the other denies the ſame thing of the ſame ſubject.

CONTRAST, in painting and ſculpture, expreſſes an oppoſition or difference of poſition, attitude, *&c.* of two or more figures contrived to make variety in a painting, *&c.* as where, in a groupe of three figures, one is ſhewn before, another behind, and another ſideways, they are ſaid to be in contraſt.

The contraſt is not only to be obſerved in the poſition of ſeveral figures, but alſo in that of the ſeveral members of the ſame figure: thus, if the right arm advance fartheſt, the right leg is to be hindermoſt; if the eye be directed one way, the arm to go the contrary way, *&c.* the contraſt muſt be purſued even in the drapery.

CONTRAST, in architecture, is to avoid the repetition of the ſame thing, in order to pleaſe by variety.

CONTRATE-WHEEL, in watch-work, that next to the crown, the teeth and hoop whereof lie contrary to thoſe of the other wheels, from whence it takes its name. See the article CLOCK.

CONTRAVALLATION, or *the line of* CONTRAVALLATION, in fortification, a trench guarded with a parapet, and uſually cut round about a place by the beſiegers, to ſecure themſelves on that ſide, and to ſtop the ſallies of the garriſon. See the article FORTIFICATION.

It is without muſquet-ſhot of the town, ſo that the army forming a ſiege, lies between the lines of circumvallation and contravallation. See the article CIRCUMVALLATION.

CONTRAVENTION, in law, a man's failing to diſcharge his word, obligation, duty, or the laws or cuſtoms of the place. The penalties impoſed in caſes of contravention only paſs for comminatory. See the article COMMINATORY.

CONTRAVENTION, in a more limited ſenſe, ſignifies the non-execution of an ordinance or edict. It is ſuppoſed to be the effect of negligence, or ignorance.

CONTRAYERVA, in the materia medica, the name by which the root of the doriſtenia plant is known in the ſhops. See the article DORISTENIA.

It is an irreguſar ſhaped root, knotty and uneven on the ſurface; its uſual length being from one inch to an inch and an half: it is to be choſen in large and fair roots, firm, ſound, and of a good colour, full of knobs, not eaſily broken, and of a pungent acrid taſte.

The antients knew nothing of this root. It is brought from New Spain, and is accounted an excellent ſudorific: it ſtrengthens the ſtomach, diſpels flatulencies, and helps digeſtion. It is greatly uſed in fevers of many kinds, and is even by ſome recommended againſt the plague, and other malignant diſtempers, as one of the greateſt known remedies, on account of its antiſeptic virtue. It is given in powder and decoction; but with us principally in the form of the lapis contrayerva of the ſhops: its doſe is from ten grains to half a dram.

The lapis contrayerva is compoſed of crab's claws, prepared, one pound; prepared pearls, and red coral, of each three ounces; powder of contrayerva, five ounces: this uſed to be wetted into a paſte, and made up into balls, whence it has its name. But the new Diſpenſatory orders it to be kept in powder, under the name of pulvis contrayervæ compoſitus.

CONTRE, in heraldry, an appellation given to ſeveral bearings, on account of their cutting the ſhield contrary and oppoſite ways: thus we meet with contre-bend, contre-chevron, contre-pale, *&c.* when there are two ordinaries of the ſame nature oppoſite to each other, ſo as colour may be oppoſed to metal, and metal to colour. See COUNTER.

CONTRE-BARRE'. See the article COUNTER-BARRED.

CONTRE-CHANGE'. See COUNTER-CHANGED.

CONTRE-CHEVRONNE'. See the article COUNTER-CHEVRONED.

CONTRE-COMPONE'. See COUNTER-COMPONED.

CONTER-ERMINE', *&c.* See the article COUNTER-ERMINE, *&c.*

CONTRIBUTION, in a general ſenſe, the payment of each perſon's quota, or the ſhare he bears in ſome impoſition or common expence. Contributions are either voluntary, as thoſe of expences for carrying on ſome undertaking for the public intereſt; or involuntary, as thoſe of taxes and impoſts.

CONTRIBUTION, in a military ſenſe, an impoſition or tax paid by frontier-countries to an enemy, to prevent their being plundered and ruined by him.

CONTRIBUTIONE FACIENDA, in law, a writ that lies where tenants in common are bound to do the ſame thing, and one or more of them refuſe to contribute their part; as where they jointly hold a mill, *pro indiviſo*, and equally ſhare the profits thereof, if the mill falls to decay, and one or more of the perſons refuſe to contribute to its reparation, the reſt ſhall have this writ to compel them.

CONTRITION, in theology, a ſorrow for our ſins, reſulting from the reflexion of having offended God, from the ſole conſideration of his goodneſs, without any regard to the puniſhment due to the treſpaſs, and attended with a ſincere reſolution of reforming them.

The ſcripture never uſes this term in this ſenſe; but there are ſeveral paſſages which prove, that, without contrition, there is no repentance, and without repentance no remiſſion of ſins.

CONTROL, COMPTROL, or CONTROLE, is properly a double regiſter kept of acts, iſſues, *&c.* of the officers or commiſſioners in the revenue, army, *&c.* in order to perceive the true ſtate thereof, and to certify the truth, and the due keeping of the acts ſubject to the enregiſterment.

CONTROLLER, an officer appointed to control or overſee the accounts of other officers, and, on occaſion, to certify whether or no things have been controlled or examined.

In England we have ſeveral officers of this name, controller of the king's houſe, controller of the navy, controller of the cuſtoms, controller of the mint, *&c.*

CONTROLLER *of the hanaper*, an officer that attends the lord chancellor daily, in term and in ſeal-time, to take all things, ſealed in leather bags, from the clerks of the hanaper, and to mark the number and effect thereof, and enter them in a book, with all the duties belonging to the king and other officers, for the ſame, and ſo charge the clerk of the hanaper with them.

CONTROLLER *of the pipe*, an officer of the exchequer, that makes out a ſummons twice every year, to levy the farms and debts of the pipe. See the articles PIPE and EXCHEQUER.

CONTROLLERS *of the pells*, two officers of the exchequer, who are the chamberlain's clerks, and keep a control of the pell of receipts, and goings out.

CONTROVER, in law, a perſon, who, of his own head, invents and ſpreads falſe news.

CONTROVERSY, *controverſia*, in the civil law, a conteſt, or contention, between two or more perſons, concerning a certain property.

A man ſeems to occaſion a controverſy for property, when he prohibits any body from the poſſeſſion of his natural right.

CONTUMACY, in law, a refuſal to appear in court, when legally ſummoned; or the diſobedience to the rules and orders of a court, having power to puniſh ſuch offence.

In a criminal ſenſe, the contumacious is condemned, not becauſe the crime is proved on him, but becauſe he is abſent.

In England, contumacy is to be proſecuted to outlawry. In France, all contumacies are annulled, if the accuſed make his appearance in five years; if he die in that time, his relations are permitted to purge his memory.

CONTUSION, in medicine and ſurgery, any hurt of the body that is inflicted by a blunt inſtrument; and ſince, in this caſe, an infinite number of ſmall veſſels and fibres are injured and broken, a contuſion may properly be ſaid to be a congeries of an infinite number of ſmall wounds.

Contuſions may be diſtinguiſhed into ſeveral ſorts: 1. Some may be called ſimple contuſions; that is, when only the ſoft external parts are injured: ſome are compound, when the internal or bony parts alſo partake of the injury. 2. Some contuſions are ſlight, others of great conſequence: this depends upon the cauſe of the injury, and the nature of the part injured. 3. Laſtly, ſome contuſions are ſo circumſtanced, which is very wonderful,

that the internal parts ſhall be violently affected, whilſt the external remain whole and unhurt.

When the ſmall veſſels and fibres have been broken by a contuſion, the fluids that were contained in them will be forced out: this will occaſion obſtructions, corruptions, inflammations, and ulcers, and even a gangrene, and ſeveral other miſchiefs, in proportion to the violence of the cauſe, and the nature of the part affected. When the external parts are contuſed, the ſkin at the ſame time remaining whole, the blood will ſtagnate under it, and occaſion red, black, and livid ſpots, *&c.* and if this happens near a bone, a caries. Contuſions may be examined by the eye; for when inflicted upon the external parts of the body, tumours are formed, and the injured part diſcoloured. When the contuſion is not within the reach of the eye, it muſt be felt for; an unnatural ſoftneſs of the limb, or a fluctuation of the extravaſated blood under the finger, will point out the injured part; pains and rigidity of the contuſed part will make the ſame diſcovery; and laſtly, a judgment may be formed of the degree of the contuſion, from the manner in, and the inſtrument with, which it was given. Slight contuſions are attended with little or no inconvenience, beſides diſcolouring the ſkin; and even that deformity is of a very ſhort duration; but in larger contuſions, where there is a great collection of ſtagnating blood in the muſcular parts, an abſceſs, gangrene, or ſphacelus will eaſily follow. Contuſions of the internal parts are extremely dangerous, in proportion to the violence of the hurt, and the conſequence of the part in performing the neceſſary offices of life. If inſtant death does not happen in this caſe, it is uſually attended with ſuch dangerous inflammations, that the patient conſumes away by degrees, and rarely eſcapes. Contuſions of the bones, particularly of their medulla, and of the joints or ligaments, are very dangerous, which will make it neceſſary to cut off the limb, to preſerve the life of a patient: but the contuſion of the cranium, from the vicinity of the brain, exceeds the reſt in the miſchievous conſequences which attend it: and laſtly, if the eye is contuſed, a tumour and inflammation will ſucceed, and frequently the loſs of ſight. The principal care in the cure of contuſions, ſhould be to divide the inſpiſſated fluids, and, at the ſame time, to prevent the parts, from ſuppurating and being afflicted with a gangrene. There are ſeveral methods ſucceſsfully uſed for the cure of ſlight contuſions, as when a tumour ariſes in the forehead from a fall, it may be cured by fomenting with warm wine, with the ſpirit of wine, by hungary water, or by applying cold vinegar, mixed with ſalt, to the part; or by clapping a broad piece of money, or a plate of milled lead upon the tumour, and faſtening it on with a very tight bandage. Larger contuſions may be dreſſed with decoctions ex ſcordio, ſabina, abrotano, vel ſeorſim, vel junctim, in vino vel aqua ſalſa. Great benefit will be found by applying a ſponge dipped in decocto ſaponis veneti, in urina recenti; or by the applications of aqua calcis cum admixto ſpiritu vini camphorato; vel acetum ſemine carvi coctum. Theſe remedies are to be applied warm.

When the contuſion is ſo violent that it is impoſſible to divide the ſtagnating fluids, and return them into the circulation, and the parts are haſtening to become gangrenous, they muſt be ſcarified without delay; which being done, there muſt be proper fomentations applied, before which the tumour muſt be rubbed well with hot cloths. See SCARIFICATION.

Where the contuſion is of any conſequence, the adminiſtration of internal medicines ſhould not be neglected, and theſe muſt be ſuch as promote the diſcharge of ſweat and urine. In plethoric habits a vein ſhould be opened, and that repeated as often as the patient is threatened with an abſceſs or gangrene.

The cure of the wound is eaſily performed, by filling it up with pledgets ſpread with a digeſtive medicine, and laying on a warm plaſter over the dreſſings. The patient muſt abſtain from fleſh and ſtrong liquors, living wholly upon broths and thin ſpoon-meat.

CONVAL-LILLY, *convallaria*, in botany. See the next article.

CONVALLARIA, in botany, a genus of the hexandria-monogynia claſs of plants, comprehending the conval-lilly, or lilly of the valley, *lilium convallium*, ſolomon's ſeal, polygonatum, the unifolium, and a ſpecies of ſmilax. In the lilly of the valley, the flower-petal, which is ſingle in all of them, is globoſe, campanulated, and patent: in ſolomon's-ſeal, it is tubulato-campanulated, and pointed: in the unifolium, the third part of the fructification is wanting: and in

the ſmilax the flower-petal is divided into ſix very acute and patent ſegments: in all of them the fruit is a trilocular globoſe berry, containing ſingle and roundiſh ſeeds.

CONVENT, in church-hiſtory, the ſame with monaſtery. See MONASTERY.

CONVENTA PACTA. See the article PACTA CONVENTA.

CONVENTICLE, a private aſſembly or meeting, for the exerciſe of religion. The word was firſt attributed as an appellation of reproach to the religious aſſemblies of Wickliffe, in this nation, in the reigns of Edward III. and Rich. II. and is now applied to illegal meetings of non-conformiſts. There were ſeveral ſtatutes made in former reigns, for the ſuppreſſion of conventicles; but by 1 Will. and Mary, it is ordered, that diſſenters may aſſemble for the performance of religious worſhip, provided their doors be not locked, barred, or bolted.

CONVENTION, a treaty, contract, or agreement between two or more parties. Every convention among men, provided it be not contrary to honeſty, and good manners, produces a natural obligation, and makes the performance a point of conſcience. Every convention has either a name and a cauſe of conſideration; or it has none; in the firſt caſe it obliges civilly and naturally, in the latter only naturally. See the article CONTRACT.

CONVENTION, in antient and modern pleadings, is uſed for a covenant, or agreement; as in the book of rolls of the manor of Hatfield, in Yorkſhire, we have a record of a pleaſant convention in the reign of Edward III. between Robert de Ruderham and John de Ithen, the latter of whom ſold the devil in a ſtring, for three pence half penny, to the former, to be delivered the fourth day after the convention: when the purchaſer making his demand, the ſeller refuſed to give him livery; but it appearing to the court that ſuch a plea does not lie among chriſtians, the parties were adjourned to hell for judgment.

CONVENTION is alſo a name given to an extraordinary aſſembly of parliament, or the ſtates of the realm, held without the king's writ; as was the convention of eſtates, who, upon the retreat of king James II. came to a concluſion that he had abdicated the throne, and that the right of ſucceſſion devolved to king William and queen Mary; whereupon their aſſembly expired as a convention, and was converted into a parliament.

CONVENTIONE FACIENDA, in law, a writ of covenant, which lies in caſe of any breach of contract, to oblige the party to ſtand to his agreement.

CONVENTUAL, in general, denotes ſomething belonging to a convent, or monaſtery; thus, monks who actually reſide in a convent, are called conventuals, in contradiſtinction to thoſe who are only gueſts, or in poſſeſſion of benefices depending on the houſe.

CONVERGING, or CONVERGENT LINES, in geometry, are ſuch as continually approach nearer one another; or whoſe diſtance becomes ſtill leſs and leſs. Theſe are oppoſed to divergent lines, the diſtance of which become continually greater: thoſe lines which converge one way, diverge the other.

CONVERGING HYPERBOLA, is one whoſe concave legs bend in towards one another, and run both the ſame way. See the articles HYBERBOLA and CURVE.

CONVERGING RAYS, in optics, thoſe rays that, iſſuing from divers points of an object, incline towards one another, till, at laſt, they meet and croſs, and then become diverging rays.

Thus the rays A B and C B (plate L. fig. 2.) converge till they come to the point B; and then they diverge, and run off from one another, in the lines B E, B F.

CONVERGING SERIES. See the article SERIES.

CONVERSE, in mathematics. One propoſition is called the converſe of another, when, after a concluſion is drawn from ſomething ſuppoſed in the converſe propoſition, that concluſion is ſuppoſed; and then, that which in the other was ſuppoſed, is now drawn as a concluſion from it: thus, when two ſides of a triangle are equal, the angles under theſe ſides are equal; and, on the converſe, if theſe angles are equal, the two ſides are equal. See the article TRIANGLE.

CONVERSE DIRECTION, in aſtrology, is uſed in oppoſition to direct direction; which laſt carries the promoter to the ſignificator, according to the order of the ſigns; but the former carries it from eaſt to weſt, contrary to the order of the ſigns.

CONVERSION, in a moral ſenſe, implies a repentance for a temper and conduct unworthy our nature, and unbecoming our obligations to its author, and a reſolution to act a wiſer and a better part for the future.

CONVERSION, in rhetoric, &c. is underſtood of arguments which are returned, retorted, and ſhewn on oppoſite ſides, by changing the ſubject into the attribute, and the attribute into the ſubject. See the article ATTRIBUTE, &c.

CONVERSION, in war, a military motion whereby the front of a battalion is turned where the flank was, in caſe the battalion is attacked in the flank. See the article QUARTER-WHEELING.

As this may often be the caſe in action, this motion is accounted a moſt uſeful and neceſſary one.

CONVERSION *of equations*, in algebra, is when the quantity ſought, or any part or degree thereof, being in fractions, the whole is reduced to one common denomination, and then omitting the denominators, the equation is continued in the numerators only. Thus ſuppoſe $a-b=\frac{aa+cc}{d}+b+b$; multiply all by d, and it will ſtand thus, $da-dc=aa+cc+db+db$. See EQUATION.

CONVERSION *of propoſitions*, in logic, the changing of the ſubject into the place of the prædicate, and the prædicate into the place of the ſubject; and yet always retaining the ſame quality of both propoſitions: as, *Every right-lined triangle has the ſum of its angles equal to two right ones: Every right-lined figure, that has the ſum of its angles equal to two right ones, is a triangle.*

Converſion is uſually defined a due change of the order of the extremes: *i. e.* under ſuch a habitude and coherence, with reſpect to each other, that the one is rightly inferred from the other.

CONVERT, a perſon who has undergone converſion. See the article CONVERSION.

Convert is more frequently uſed in reſpect of changes from one religion, or religious ſect, to another.

Theſe, with regard to the religion they have relinquiſhed, are denominated apoſtates, and converts only with relation to the religion turned to. Henry III. built a houſe in London, for ſuch Jews as turned chriſtians, called *Domus converſorum*, where the proſelytes, being obliged to regular cuſtoms, had a handſome ſupport allowed them for life.

CONVERTS, in a monaſtic ſenſe, are lay friers, or brothers, admitted for the ſervice of the houſe, without orders, and not allowed to ſing in the choir.

CONVEX, an appellation given to the exterior ſurface of gibbous or globular bodies, in oppoſition to the hollow inner ſurface of ſuch bodies, which is called concave: thus we ſay, a convex frieze, lens, mirror, ſuperficies, &c. See the articles FRIEZE, LENS, &c.

CONVEXITY, that configuration or ſhape of a body, on account of which it is denominated convex. See CONVEX.

CONVEYANCE, in law, a deed or inſtrument that paſſes land, &c. from one perſon to another.

The moſt uſual conveyances are deeds of gift, bargain and ſale, leaſe and releaſe, fines and recoveries, &c. The words *give and grant*, are neceſſary in a conveyance at common law: but though ſome maintain that conveyances ſhall operate according to the words; yet, of late, the judges have a greater regard to the paſſing of the eſtate, than to the manner by which it is paſſed.

CONVICT, in common law, a perſon that is found guilty of an offence by the verdict of a jury.

The law implies that there muſt be a conviction before puniſhment for any offence, though it be not mentioned in any ſtatute. On a joint indictment, or information, ſome of the defendants may be convicted and others acquitted.

CONVICT RECUSANT, a perſon who has been legally preſented, indicted, and convicted, for refuſing to come to church to hear the common prayer, according to the ſtatutes 1 and 23 Eliz. and 3 Jac. I.

CONVICTION, in theology, expreſſes the firſt degree of repentance, wherein the ſinner becomes ſenſible of his guilt, of the evil nature of ſin, and of the danger of his own ways. See CONTRITION.

CONVICTION, in law. See CONVICT.

CONVIVIUM, BANQUET, in our old cuſtoms, a kind of tenure whereby the tenant was obliged to provide an entertainment for his lord, once, or oftener, every year. It correſponded with the procuration of the clergy. See PROCURATION.

CONULUS, in the hiſtory of ſhell-fiſh, a name by which ſome call thoſe echini which are of a conical ſhape: they are frequently found foſſile, in which ſtate they are known by the names of ſcolopendritæ, bufonitæ, and prileæ; in engliſh cap-ſtones.

CONVOCATION, an aſſembly of the clergy of England, by their repreſentatives, to conſult of eccleſiaſtical matters. It is held during the ſeſſion of parliament, and conſiſts of an upper and a lower houſe. In the upper ſit the biſhops, and

in

in the lower the inferior clergy, who are repreſented by their proctors, conſiſting of all the deans and archdeacons, of one proctor for every chapter, and two for the clergy of every dioceſe, in all one hundred and forty-three divines, *viz.* twenty-two deans, fifty-three archdeacons, twenty-four prebendaries, and forty-four proctors of the dioceſan clergy. The lower houſe chooſes its prolocutor, whoſe buſineſs it is to take care that the members attend, to collect their debates and votes, and to carry their reſolutions to the upper houſe. The convocation is ſummoned by the king's writ, directed to the archbiſhop of each province, requiring him to ſummon all biſhops, deans, archdeacons, *&c.*

The power of the convocation is limited by a ſtatute of Henry VIII. They are not to make any canons or eccleſiaſtical laws, without the king's licence; nor when permitted to make any, can they put them in execution, but under ſeveral reſtrictions. They have the examining and cenſuring all heretical and ſchiſmatical books and perſons, *&c.* but there lies an appeal to the king in chancery, or to his delegates. The clergy in convocation, and their ſervants, have the ſame privileges as members of parliament. See PARLIAMENT.

CONVOLUTION, a winding motion, proper to the trunks of ſome plants, as the convolvulus or bindweed, the claſpers of vines, bryony, *&c.*

CONVOLVULUS, BINDWEED, in botany, a genus of the pentandria-monogynia claſs of plants, the corolla of which conſiſts of a ſingle, patent, campanulated petal, plicated and very lightly divided at the rim: the fruit is a capſule, of a roundiſh figure, contained within the cup, and formed of one, two, or three valves: the ſeeds are two, roundiſh, and often acute: the corolla is uſually cut in ten places, but there are ſpecies in which theſe crenæ are but five. See plate LI. fig. 1.

To this genus belong ſcammony, mechoacan, jalap, and turbith; for the virtues of which ſee the articles SCAMMONY, MECHOACAN, *&c.*

As to the bindweeds, properly ſo called, they are cathartic, and ſaid to be good for preventing abortion.

This plant has the reputation of purging off bilious, acrid, and ſerous humours: the root is cathartic. The women uſe a decoction of this plant as a preſervative againſt miſcarriages: a decoction of it is alſo recommended as a mild evacuant of bile.

CONVOY, in marine affairs, one or more ſhips of war, employed to accompany and protect merchant-ſhips, and prevent their being inſulted by pirates, or the enemies of the ſtate in time of war.

CONVOY, in military matters, a body of men that guard any ſupply of men, money, ammunition, or proviſions, conveyed by land into a town, army, or the like, in time of war.

CONVULSION, *ſpaſmus*, in medicine, a preternatural and violent contraction of the membranous and muſcular parts, ariſing from a ſpaſmodic ſtricture of the membranes ſurrounding the ſpinal marrow, and the nerves diſtributed from it, and an impetuous influx of the nervous fluid into the organs of motion. See the article SPASM.

Convulſions attack the patient variouſly; for in ſome they happen ſuddenly, without any ſigns of the approaching diſorder; whilſt in others, they may be foreſeen by various ſigns. During the convulſive paroxyſm, the limbs are ſurpriſingly agitated; ſometimes the arms are ſo retorted towards the back, that the patient ſeems to ſit upon them; ſometimes they beat the air: at other times, the legs are drawn into various directions; ſometimes they ſtamp: ſometimes the ſpine of the back is incurvated ſo as to form an arch, whilſt the breaſt is raiſed: and at other times the whole body is as ſtiff as a ſtone. Theſe agitations ſeize many in the very poſture in which they are, without throwing them on the ground; whilſt others, like epileptic patients, fall ſuddenly down, weep, laugh, grind their teeth, gape, hang out their tongue, and are vertiginous.

After the paroxyſm many patients retain an incredible languor of the whole body, many fall into deliriums, and a profound ſleep; in others, the diſorder is terminated by eructations, an exploſion of flatulencies, vomiting, a copious diſcharge of the lymph, *&c.* Thoſe are moſt ſubject to convulſions, whoſe nervous ſyſtems are either naturally, or by any other cauſe, weak, eſpecially if their juices be impure. Among the mediate cauſes which diſpoſe to this conſtriction of the ſpinal marrow, the moſt conſiderable are violent paſſions, eſpecially if the patient be expoſed to cold, or commits any error in regimen.

Though

Though convulſions are very terrible, they are not ſuddenly mortal: when they are recent, the patient young, and the conſtitution ſound, an eaſy and ſhort cure is to be hoped for.

In the cure of convulſive motions, we are firſt to correct the material cauſes which ſupport the diſorder; prepare them for an elimination, and commodiouſly evacuate them: then the violent and irregular commotions of the nervous parts muſt be allayed, and the nervous ſyſtem corroborated, to prevent a relapſe: the cure is not to be obtained by a great variety of draſtic remedies; but rather by mild medicines, and ſuch as are friendly to nature. If the diſorder ariſes from a redundancy of humours, or a thickneſs of the blood, Hippocrates adviſes veneſection, either in the foot or arm, to be uſed; or ſcarifications to be interpoſed: but theſe motions are rarely removed without a proper air, exerciſe, and regimen. Warm baths for the feet, prepared of river water, and chamomile-flowers, have a ſingular efficacy; and alſo large draughts of cold ſimple water. If convulſions ariſe from exceſs of venery, the patient is by all means to abſtain from any thing that produces commotions. If they ariſe from a ſuppreſſion of the menſes, &c. they muſt be removed by recalling theſe evacuations. See the next article.

CONVULSIVE, in medicine, a term applied to thoſe motions which naturally ſhould depend on the will, but are produced involuntarily by ſome external cauſe, as a contraction of the muſcles, &c. See the preceding article.

Hence convulſive may be applied to any thing that occaſions a convulſion, of which there are a great variety. Wounds of the nerves are ſaid to be convulſive: white hellebore is convulſive; and the cramp is a convulſive contraction of ſome muſcular part of the body. Children are much liable to convulſive diſorders, ariſing from various cauſes, as repletion, curdling of the milk in the ſtomach or inteſtines, worms, &c. St. Vitus's dance is a ſort of convulſive diſorder boys and girls are ſubject to: it diſcovers itſelf by a kind of lameneſs: this diſorder is by ſome ſuppoſed to be a paralytic one, and to proceed from a relaxation of the muſcles, which, being unable to perform their functions in moving the limbs, ſhake them irregularly by jerks. This diſorder, as ſeveral convulſive diſorders do, and particularly epilepſies, keeps pace with the phaſes of the moon, or with the tides. Purging and blood-letting are recommended according as the age of the patient will bear it, for a cure in this diſeaſe. Convulſive motions, occaſioned by worms, are to be cured by deſtroying the worms: for the convulſive aſthma, ſee the article ASTHMA.

CONWAY, a market-town of Caernarvonſhire, in north Wales, ſituated near the mouth of a river of the ſame name, fifteen miles weſt of St. Aſaph: weſt long. 3° 50′, and north lat. 53° 20′.

CONYZA, FLEA-BANE, in botany, a genus of the ſyngeneſia-polygamia-ſuperflua claſs of plants, the compound flower of which is tubuloſe, conſiſting both of hermaphrodite and female ones: theſe laſt have no flower-petals; but the hermaphrodite ones conſiſt of one infundibuliform petal, divided into five patulous ſegments at the limb: the ſtamina are five very ſhort capillary filaments: the ſeeds are ſolitary, oblong, and crowned with ſimple downy filaments, and ſtand in the cup.

The common flea-bane is recommended in the jaundice, to promote the menſes, and in the ſtrangury. Some alſo make an ointment of its leaves and root, which is ſaid to cure the itch.

CONZA, a town of the kingdom of Naples, in Italy, ſituated in the farther Principate, on the river Offanto, fifty miles ſouth-eaſt of the city of Naples; eaſt long. 16°, north lat. 41°.

It is the ſee of an archbiſhop.

COOK, a perſon whoſe buſineſs it is to dreſs and deliver out victuals.

A ſhip's cook has an aſſiſtant, commonly denominated the cook's mate.

COOK-ROOM, in a ſhip, the place where victuals are dreſſed.

The cook-room in ſhips is ſometimes ſituated in the hold, but generally in the forecaſtle, where there are furnaces contrived, and other neceſſaries for the purpoſe. See the article SHIP.

COOLER, among brewers, diſtillers, &c. a large veſſel wherein certain liquors are cooled, after having been boiled.

COOLERS, in medicine, thoſe remedies, which affect the organs of feeling with an immediate ſenſe of cold, being ſuch as have their parts in leſs motion than thoſe of the organs of feeling; as fruits, and all acid liquors; or they are ſuch as, by a particular viſcidity, or groſſneſs of parts, give the animal fluids a greater conſiſtency than they had before, and conſequently retard their motion; having leſs of that inteſtine force on which their heat depends.

Of

Of this ſort are cucumbers, and all ſubſtances producing viſcidity.

We find little preſcribed in the ſhops under the intention of coolers, but great variety may be made by the good houſewife: ſuch are lemonade with wine, wine and water, and ſeveral juleps, conſiſting of ſyrup of lemons or oranges, with wine, roſe-water, and the like. Several cooling decoctions may alſo be made of lemons, pearl-barley, liquorice, &c. in ſpring water, adding a little cochineal, ſugar, or roſe-water.

COOM, a term applied to the ſoot that gathers over an oven's mouth; alſo for that black, greaſy ſubſtance, which works out of the wheels of carriages.

Coom or ſoot is often uſed in medicine, infuſed in wine, with other ingredients, as an antihyſteric, and againſt palpitations of the heart, &c. The ſpirit of ſoot is alſo uſed for the ſame purpoſes, and is accounted of great uſe in cephalic caſes.

COOMB, or COMB *of corn*, a dry meaſure, containing four buſhels, or half a quarter. See the article MEASURE.

COOMINGS, or COAMINGS. See the article COAMINGS.

COOPER, in geography, the name of a river in Carolina, in north America.

COOPER, on board a ſhip, he that looks to the caſks, and all other veſſels for beer, water, or any other liquor. He has a mate under him.

CO-ORDINATE, ſomething of equal order, rank, or degree with another. See the article ORDER.

CO-ORDINATION, in regard of cauſe, imports an order of cauſes, wherein a variety of the ſame kind, order and tendency concur, in the production of the ſame effect.

COOS, or LONGO, an iſland of the Archipelago, ſituated near the ſouth-weſt coaſt of Natolia, and ſubject to the Turks; eaſt long. 27° 30′, north lat. 37°.

COPAIBA, or *balſam of* COPAIBA. See the article BALSAM.

COPAL, in the materia medica, is a true reſin, being inflammable and ſoluble in oil, tho' it, as well as the anime, and ſome other bodies of this claſs, is miſcalled a gum.

The true copal is a reſin of a conſiderably firm texture, brought to us from South America in large maſſes, or in ſingle lumps or drops. The copal greatly reſembles amber in appearance; it is of a fragrant ſmell; its taſte is ſubaſtringent and ſomewhat aromatic. The Americans uſe copal as they do anime, for diſorders of the head, by way of fumigations. We do not uſe it at all in medicine, but an excellent varniſh is made of it.

COPARCENARY-SHARE, in law, that of coparcenars. See the next article.

COPARCENARS, otherwiſe called *parceners*, ſuch as have equal portions in the inheritance of their anceſtor.

Coparceners are ſuch, either by law, or cuſtom: coparceners by law are the female iſſue, who, in default of heirs male, come equally to the lands of their anceſtor. They may be obliged to make partition of the lands thus deſcended, but ſhould be made by coparceners at full age. Coparceners by cuſtom, are thoſe who, by ſome cuſtom of the country, challenge equal parts in ſuch lands, as in Kent, by the cuſtom of gavel-kind.

COPE, among eccleſiaſtical writers, an ornament uſually worn by chantors and ſubchantors, when they officiated in the church ſolemnity. It is alſo worn by romiſh biſhops, and other ordinaries; and reaches from the ſhoulders to the feet.

COPE, among miners, a duty of ſix-pence for every load of ore. See LOAD.

COPEL, or COPPEL. See COPPEL.

COPENHAGEN, the capital of the kingdom of Denmark, ſituated on the eaſtern ſhore of the iſland of Zealand, upon a fine bay of the Baltic ſea, not far from the ſtrait called the Sound: eaſt long. 13°, and north lat. 55° 30′.

It is a ſtrong town, about five miles in circumference, fortified after the modern way; and the harbour is ſurrounded by forts and platforms, its entrance being ſo narrow, that only one ſhip can paſs in at a time. It has an univerſity and military academy, and is remarkable for one of the fineſt muſeums, or collection of curioſities, in Europe.

COPERAS, or COPPERAS, in natural hiſtory. See the article COPPERAS.

COPERNICAN, in general, ſomething belonging to Copernicus. Hence,

COPERNICAN-SYSTEM, or HYPOTHESIS, that ſyſtem of the world, wherein the ſun is ſuppoſed at reſt in the center, and the planets, with the earth, to move in ellipſes round him.

The ſun and ſtars are here ſuppoſed at reſt, and that diurnal motion which they appear to have from eaſt to weſt, is imputed to the earth's motion from weſt to eaſt, round its axis. See the articles EARTH and PLANETS.

This

This ſyſtem was received of old by Philolaus, Ariſtarchus, and Pythagoras, from which laſt it had the name of the pythagoric ſyſtem: it was alſo held by Archimedes; but after him it became neglected, and even forgotten for many ages, till it was revived by Copernicus, about the year 1500, and from him named the copernican ſyſtem.

According to this hypotheſis, the ſun is ſuppoſed very near the center of gravity of the whole ſyſtem, and in the common focus of every one of the planetary orbits: next him mercury performs his revolution around him; next mercury is the orbit of venus; and next to venus, our earth, with its attendant or ſecondary the moon, performing a joint courſe, and in their revolution meaſuring out the annual period. Next the earth is mars, the firſt of the ſuperior planets; next him jupiter, and laſt of all ſaturn. See plate L. fig. 3.

Theſe and the comets are the conſtituent parts of the ſolar ſyſtem, which is now received and approved as the only true one, for the reaſons following. See the articles COMET, VENUS, MARS, &c.

1. It is moſt ſimple, and agreeable to the tenor of nature in all her actions; for by the two motions of the earth, all the phænomena of the heavens are reſolved, which, by other hypotheſes, are inexplicable, without a great number of other motions, contrary to philoſophical reaſonings. See the articles PTOLEMAIC and TYCHONIC.

2. It is more rational to ſuppoſe that the earth moves round the ſun, than that the huge bodies of the planets, the ſtupendous body of the ſun, and the immenſe firmament of ſtars, ſhould all move round the inconſiderable body of the earth, every twenty-four hours.

3. But that harmony which, upon this ſuppoſition, runs through the whole ſolar ſyſtem, wonderfully confirms this hypotheſis, *viz.* that the motions of all the planets, both primary and ſecondary, are governed and regulated by one and the ſame law, which is, that the ſquares of the periodical times of the primary planets, are to each other as the cubes of their diſtances from the ſun; and likewiſe the ſquares of the periodical times of the ſecondaries of any primary, are to each other as the cubes of their diſtances from that primary. Now the moon, which, in the copernican ſyſtem, is a ſecondary of the earth, in the other hypotheſis is a primary one; and ſo the rule cannot take place, becauſe the periodical time, conſidered as that of a primary one, does not agree therewith. See the article PERIOD, &c.

4. Again, this ſingle conſideration, Mr. Whiſton thinks enough to eſtabliſh the motion of the earth for ever, *viz.* If the earth does not move round the ſun, the ſun muſt move, with the moon, round the earth. Now the diſtance of the ſun, to that of the moon, being as 10,000 to 46, and the moon's period being leſs than 28 days, the ſun's period would be found no leſs than 242 years, whereas, in fact, it is but one year.

5. The ſun is the fountain of light and heat, which it irradiates through all the ſyſtem, and, therefore, it ought to be placed in the center, ſo that the planets may, at all times, have it in an uniform and equable manner.

6. For, if the earth be in the center, and the ſun and planets revolve about it, the planets would then, like the comets, be ſcorched with heat, when neareſt the ſun, and frozen with cold in their aphelia, or greateſt diſtance, which is not to be ſuppoſed.

7. If the ſun be placed in the center of the ſyſtem, we have then the rational hypotheſis of the planets being all moved about the ſun, by the univerſal law or power of gravity ariſing from his vaſt body, and every thing will anſwer to the laws of circular motion and central forces; but otherwiſe, we are wholly in the dark, and know nothing of the laws and operations of nature.

8. But happily we are able to give not only reaſons, but demonſtrative proofs, that the ſun does poſſeſs the center of the ſyſtem, and that the planets move about it at the diſtance and in the order aſſigned in this and in other places. See the article DISTANCE.

The firſt is, that mercury and venus are ever obſerved to have two conjunctions with the ſun, but no oppoſition, which could not happen unleſs the orbits of theſe planets lay within the orbit of the earth.

9. The ſecond is, that mars, jupiter, and ſaturn, have each their conjunctions and oppoſitions to the ſun alternate and ſucceſſively, which could not be, unleſs their orbits were exterior to the orbit of the earth.

10. In the third place, the greateſt elongation or diſtance of mercury from the

ſun, is about 28°, and that of venus 47°; which anſwers exactly to their diſtance in this ſyſtem, though in the ptolemean ſyſtem they might, and would, ſometimes, be ſeen 180 from the ſun, *viz.* in oppoſition to him.

11. Fourthly, in this diſpoſition of the planets, they will all of them be ſometimes much nearer to the earth than at others; the conſequence of which is, that their brightneſs and ſplendor, and alſo their apparent diameters, will be proportionally greater at one time than another; and this we obſerve to be true every day. Thus the apparent diameter of venus, when greateſt, is near 66″, but when leaſt, not more than 9″ and a half; of mars, when greateſt, it is 21″, but when leaſt, no more than 2″ and a half; whereas, by the ptolemean hypotheſis, they ought always to be equal.

12. The fifth is, that when the planets are viewed with a good teleſcope, they appear with different phaſes, or with different parts of their bodies enlightened. Thus venus is ſometimes new, then horned, and afterwards dichotomized, then gibbous, afterwards full, and ſo increaſes and decreaſes her light in the ſame manner as the moon, and as the copernican ſyſtem requires.

13. The ſixth is, that the planets, all of them, do ſometimes appear direct in motion, ſometimes retrograde, and at other times ſtationary. Thus, venus, as ſhe paſſes from her greateſt elongation weſtward, to her greateſt elongation eaſtward, will appear direct in motion, but retrograde as ſhe paſſes from the latter to the former; and when ſhe is in thoſe points of greateſt diſtance from the ſun, ſhe ſeems for ſome time ſtationary. All which is neceſſary upon the copernican hypotheſis, but cannot happen in any other.

14. The ſeventh is, that the bodies of mercury and venus, in their lower conjunctions with the ſun, are hid behind the ſun's body, and in the upper conjunctions are ſeen to paſs over the ſun's body, or diſk, in form of a black round ſpot, which is neceſſary in the copernican ſyſtem, but impoſſible in the ptolemean ſyſtem.

15. The eighth, and laſt, is, that the times in which theſe conjunctions, oppoſitions, ſtations, and retrogradations of the planets happen, are not ſuch as they would be were the earth at reſt in its orbit, but preciſely ſuch as would happen were the earth to move, and all the planets in the periods aſſigned them; and therefore this, and no other, can be the true ſyſtem of the world.

COPERNICUS, the name of an aſtronomical inſtrument, invented by Mr. Whiſton, to exhibit the motion and phænomena of the planets, both primary and ſecondary. It is built upon the copernican ſyſtem, and for that reaſon called by this name. It conſiſts of ſeveral concentrical circles of wood, upon which are inſcribed numbers, transferred hither from the aſtronomical tables, by the various diſpoſitions of theſe circles, which are made ſo as to ſlide within each other, by which queſtions are ſolved ſo as to ſave long calculations. To exhibit eclipſes there is a particular apparatus, conſiſting of a terreſtrial globe, ſo diſpoſed, as that, being turned round its axis, the light of the ſun, or a candle projected through a glaſs plane, marked out into concentric circles, expreſſes the digits of the eclipſe: and thus is the path of the eclipſe, with its degree or quantity in any part of the path, repreſented with great accuracy. The inventor of this inſtrument has wrote a treatiſe purpoſely to explain it.

COPHTS, COPHTI, or COPTS, a name given to ſuch of the chriſtians of Egypt, as are of the ſect of jacobites.

The cophts have a patriarch, who is ſtiled the patriarch of Alexandria, having eleven or twelve biſhops under him, but no archbiſhop. The reſt of the clergy, whether ſecular or regular, are of the order of St. Antony, St. Paul, and St. Macarius, each of whom have their monaſteries. The cophts have ſeven ſacraments, *viz.* baptiſm, the euchariſt, confirmation, ordination, faith, faſting, and prayer. They deny the holy ghoſt to proceed from the ſon; they only allow of three oecumenical councils, that of Nice, Conſtantinople and Epheſus. They only allow of one nature, will, and operation in Jeſus Chriſt, after the union of the humanity with the divinity. With regard to their diſcipline, they circumciſe their children before baptiſm; they ordain deacons at five years of age; they allow of marriage in the ſecond degree, and put away their wives, and eſpouſe others, while the firſt are living; they forbear to eat blood, and believe in a baptiſm by fire, which, according to ſome, they confer by applying a red hot iron to their cheeks or forehead.

COPHTIC, or COPTIC LANGUAGE, is that ſpoke by the Cophts, being the antient language of the Egyptians, intermixed with the greek, and the characters of it being thoſe of the greek.

The antient coptic is now a dead language, to be met with no where but in books, and thoſe only tranſlations of the ſcriptures, and of eccleſiaſtical offices, or others that have a relation thereto; the language now uſed over all the country being that of the arabic.

COPHTIC MONKS, religious, among the chriſtians of Egypt, who have the higheſt veneration for a monaſtic life, conſidering it as the philoſophy of the law of Jeſus Chriſt, the monks as terreſtrial angels, or celeſtial men. They are obliged to part with their poſſeſſions, to renounce marriage for ever, to live in deſarts, to be cloathed in wool, and to eat no meat.

COPIA *libelli deliberanda*, a writ that lies where a perſon cannot get the copy of a libel from a judge of the ſpiritual court.

COPIAPO, a port-town of Chili, in South America, ſituated on the Pacific ocean at the mouth of a river of the ſame name, in 75° weſt long. and 25° ſouth lat.

COPIATA, a man of a particular order in the primitive church, whoſe buſineſs it was to bury the dead, by preparing the graves, wrapping up the dead bodies, &c. being accounted a work of piety, wherefore the copiatæ were conſidered as having a relation to the clergy.

COPING, or COPPING *of a wall*, in architecture, the top or covert of a wall, made ſloping, to carry off the wet.

COPING *over*, in carpentry, a ſort of hanging over, not ſquare to its upright, but bevelling on its under ſide, till it end in an edge.

COPIVI, or *balſam of* COPIVI. See the article BALSAM.

COPPEL, COPEL, or CUPPEL, a chemical veſſel made of earth, pretty thick, and of the form of a platter or diſh. See plate LIII. fig. 3.

It ſuſtains the higheſt degree of fire, and retains all fuſed metals: but in it all the foſſile portions of any metal, when mixed with fuſed lead, are carried off, except gold and ſilver, which are left behind in ſmall globules. See ASSAYING.

This veſſel has a ſmall cavity, which is a kind of obtuſe, ſpherical ſegment, with a canal at its margin, through which the metal examined may be the more commodiouſly poured out. The external ſurface of the coppel is ſomewhat like a truncated cone, that it may ſtand the more ſecurely. It may be made of different bulks, according to the quantity of metal to be tried; and may be made either of ſome proper earth, or of aſhes obtained from the calcined bones almoſt of any animals, except thoſe of hogs; for the coppels made of theſe, beſides lead and other foſſils, alſo abſorb ſome parts of gold and ſilver. The aſhes of calcined plants are alſo proper for this purpoſe, provided their ſalts are well waſhed out of them. Plaiſter alſo of ſome kinds, Cramer thinks preferable to any other materials for this purpoſe: the ſmaller bones of calves, oxen, ſheep and horſes are moſt commonly uſed, and theſe are the more eaſily calcined the longer they have been expoſed to the injury of the weather. A ſmall quantity of the aſhes of theſe bones, after being calcined to the higheſt degree of whiteneſs, is to be triturated in a mortar, then put into an earthen veſſel, and a ſecond time calcined in a ſtrong fire, for ſome hours: afterwards the aſhes muſt be waſhed with water, and levigated to a fine powder, which, when moiſtened by water and the white of an egg, till the maſs coheres, is to be excavated with a peſtil; then a ſolution of the powder of vitriol may be ſprinkled over the ſurface, and the coppel laid by in a dry place, after the inequalities, protuberating on the upper margins and the bottoms are cut off with a ſharp knife.

COPPELLING, or CUPELLING, in chemiſtry, is the putting metallic ſubſtances into a coppel, or covered veſſel, made of bone-aſhes, and ſet in a naked fire, to try what gold or ſilver they will afford. See the article ASSAYING.

COPPER, *cuprum*, conſtitutes a diſtinct genus of metals, being next to iron in ſpecific gravity, but lighter than gold, ſilver, or lead.

Copper is not unfrequently found native and malleable, ſometimes in ſmall and ſlender fibres, and ſometimes in little globular and irregular maſſes. However it is moſt frequently found in the ſtate of ore, ſometimes blended with the ſtrata of ſtones, where it diſcovers itſelf in blue or green efflorеſcences. The green and blue ochers alſo are a ſort of ores of copper, and the pyritæ and marcaſites frequently contain large quantities of this metal. There is alſo a rich kind of copper-ore, of a reddiſh-grey colour; and another of a duſky purple, or blackiſh

colour. But beſides all theſe, there are two other appearances of copper-ore, known by the names of lapis lazuli, and the turcois, or turquoiſe. See the article LAZULI, &c.

In Germany and Sweden there are very good mines of copper ore, and we have ſome in England little inferior to the fineſt ſwediſh ones.

In order to diſcover whether the pyrites contains any copper, let it be roaſted in an open fire, and a ſolution made by pouring upon it a quantity of warm water: into this ſolution let iron plates, perfectly clean and free from greaſe, be immerſed; and if the pyrites contains any copper, it will ſtick to theſe iron plates, in form of a fine yellow powder.

As to the method of obtaining copper from the ore, this laſt being previouſly waſhed and powdered, is ſmelted by means of a black flux, and the metal is found at the bottom of the veſſel when cold, in the form of a ſolid and malleable maſs; which may be farther refined, by repeating the operation.

Phyſicians condemn the internal uſe of copper in any form; all its preparations being accounted poiſonous. However, as it is a very ſtrong emetic, in caſes of poiſon, where vomits are highly neceſſary to throw it up again, nothing is more efficacious: for it frequently happens that even foods, by ſtanding long in copper veſſels, acquire an emetic quality, which has very bad effects; in which caſe milk, oil, and butter are accounted good antidotes.

Preparations of COPPER, are, 1. Flowers of copper, *floris æris*, ſaid to be a medicine much uſed externally amongſt the antients, but now diſregarded; and it is prepared by melting a quantity of common, pure copper, and throwing water upon it, juſt as it begins to cool, which makes the whole maſs of the metal break into ſmall granules, called *flores æris*. 2. Verdigreaſe, *æruga æris*. 3. Calcined copper, or *æs uſtum*. 4. Flakes, or ſcales of copper, *ſquamæ æris*, being a preparation of much the ſame nature with calcined copper. 5. The blue eye-water, *aqua ſapphirina*. And, 6. Mr. Boyle's *ens veneris*: each of which articles ſee under their ſeveral heads.

COPPERAS, a name given to the factitious green vitriol. See VITRIOL.

The engliſh copperas is made at Deptford, in the following manner, from pyritæ. See the article PYRITÆ.

A heap of theſe ſtones, two or three feet thick, is laid in a bed well rammed, where being turned once in ſix months, in five or ſix years, by the action of the air and rain, they begin to diſſolve, and yield a liquor which is received in pits, and thence conveyed into a ciſtern, in a boiling houſe. The liquor at length being pumped out of the ciſtern into a leaden boiler, and a quantity of iron added thereto, in two or three days the boiling is compleated; care having been taken all along to ſupply it with freſh quantities of iron, and to reſtore the boiling, whenever it ſeems to abate. When boiled ſufficiently it is drawn off into a cooler, with ſticks acroſs, where it is left 14 or 15 days to ſhoot. The uſes of copperas are numerous. It is the chief ingredient in the dying of wool, cloths, and hats, black; in making ink, in tanning and dreſſing leather, &c. and from hence is prepared oil of vitriol, and a kind of ſpaniſh brown for painters. In medicine, it is rarely preſcribed under the name of copperas, but it is a true ſalt of iron, and often preſcribed under that name, and uſed inſtead of the genuine preparation; our chemiſts in general giving themſelves no further trouble about the making of that ſalt, than to diſſolve and purify the common copperas, and ſhoot it again into cryſtals. It is a noble deobſtruent, and is a great medicine in the ſuppreſſion of the menſes, but ſhould be uſed with caution. In large doſes it proves emetic, and, in ſmall, is found a good remedy againſt worms.

COPPICE, or COPSE, a little wood conſiſting of under woods, or ſuch as may be raiſed either by ſowing or planting.

When they are intended to be raiſed from maſt or ſeed, the ground is ploughed, in the ſame manner as it is for corn: and either in autumn or in ſpring, good ſtore of ſuch maſts, nuts, ſeeds, berries, &c. are to be ſown with the graſs, which crop is to be cut, and then the land laid for wood. They may alſo be planted about autumn, with young ſets, or plants, in rows about ten or fifteen feet diſtance. If the copſes happen to grow thin, the beſt way of thickening them is to lay ſome of the branches or layers of the trees, that lye neareſt to the bare places, on the ground, or a little in the ground: this detained with a hook or two, and covered with freſh mould, at a competent depth, will produce a world of ſuckers, and thicken a copſe ſpeedily.

COPULA,

COPULA, in logic, the verb that connects any two terms in an affirmative or negative; as *riches make a man happy*; where *make* is the copula: *no weakneſs is any virtue*; where *is* is the copula.

COPULATION, the act of generation, or the congreſs of the male and female, otherwiſe called coition. See the articles COITION and GENERATION.

COPULATIVE PROPOSITIONS, in logic, thoſe where the ſubject and predicate are ſo linked together, by copulative conjunctions, that they may be all ſeverally affirmed or denied one of another. Example, *Riches and honours are apt to elate the mind, and increaſe the number of our deſires.*

COPULATIVE CONJUNCTION. See the article CONJUNCTION.

COPY, in a law ſenſe, ſignifies the tranſcript of any original writing, as the copy of a patent, charter, deed, &c.

A common deed cannot be proved by a copy or counterpart, where the original may be procured. But if the deed be inrolled, certifying an atteſted copy, is proof of the inrollment, and ſuch copy may be given in evidence.

COPY is alſo uſed for the imitation of an original work, more particularly in painting, draught, figure, &c.

COPY, among printers, denotes the manuſcript, or original of a book, given to be printed.

COPY-HOLD, a tenure for which a tenant has nothing to ſhew but the copy of the rolls made by the ſteward of the lord's court.

It is called a baſe tenure, becauſe the tenant holds the land at the will of the lord. However it is not ſimply at the will of the lord, but according to the cuſtom of the manor by which ſuch eſtate is deſcendible, and the tenants heirs may inherit it; and a copy-holder, ſo long as he does his ſervices, and does not break the cuſtom, cannot be ejected by the lord; and if he be, he ſhall have treſpaſs againſt him.

Some copyholds the tenants hold by the verge in antient demeſne; and tho' held by copy, yet they are a kind of freehold: and other copyholds are ſuch as tenants hold by common tenure, called mere copyhold.

If a perſon would deviſe a copyhold eſtate, he cannot do it by his will, but he muſt ſurrender to the uſe of his laſt will and teſtament, and in his will declare his intent; and here the lands do not paſs by the will, but by the ſurrender thus made.

Copyhold inheritances have no collateral qualities, which do not concern the deſcent, as to make them aſſets to bind the heir, or whereof the wife may be endowed, &c. They are not extendible in execution, but are within the acts againſt bankrupts, and the ſtatutes of limitation.

COPY-HOLDER, one who is admitted tenant of lands or tenements within a manor, which, time out of mind, by uſe and cuſtom of the manor, have been demiſable and demiſed to ſuch as will take them in fee-ſimple, or fee-tale, for life, years, or at will, according to the cuſtom of the manor by copy of court-roll. But is generally where the tenant has ſuch eſtate either in fee or for three lives.

COQ. AD MED. CONSUMPT. among phyſicians, is an abbreviation for *coque ad medietatis conſumptionem*, i. e. Boil it till half of it be conſumed.

COQ. IN S. Q. AQ. *coque in ſufficiente quantitate aquæ*, i. e. Boil in a ſufficient quantity of water.

COQ. S. A. *coque ſecundum artem*, i. e. Boil according to art.

COQUIMBO, a port-town of Chili, in South America, ſituated at the mouth of a river of the ſame name, which diſcharges itſelf into the Pacific ocean: weſt long. 75° 10′, and ſouth lat. 30°.

COR, the HEART, in anatomy. See HEART.

COR CAROLI, in aſtronomy, an extra-conſtellated ſtar in the northern hemiſphere, ſituated between the coma berenices, and urſa major, ſo called by Dr. Halley in honour of king Charles.

COR HYDRÆ, a fixed ſtar of the firſt magnitude, in the conſtellation of hydra. See the article HYDRA.

COR LEONIS, or REGULUS, in aſtronomy, a fixed ſtar of the firſt magnitude, in the conſtellation leo. See LEO.

COR VENERIS, the name of a beautiful kind of heart-ſhells, called alſo cor bovis. See the article CARDIA.

CORACOBRACHIALIS, in anatomy, a muſcle that has its origin at the coracoide proceſs of the ſcapula, and its termination about the middle part of the arm. It ſerves to lift the arm obliquely outwards.

CORACOHYOIDÆUS, in anatomy, a muſcle which having its origin from the upper edge of the ſcapula, near its neck, aſcends obliquely under the maſtoidæus, and is inſerted in the os hyoides, which it ſerves to pull obliquely downwards. See the article HYOIDES.

CORACOIDES, in anatomy, a ſmall ſharp proceſs of the ſcapula, ſo called from its reſembling a crow's bill.

The coracoide proceſs in infants, is but a cartilage, afterwards it becomes an epiphyſis; and, after this, about the age of ſixteen, it is perceived to be a ſeparate bone. It ſerves to ſtrengthen the articulation of the ſhoulder, and gives origin to one of the muſcles of the arm.

CORACOMANTES, in antiquity, perſons who foretold events from their obſervations on crows.

CORAL, in natural hiſtory, a production of the ſea, uſually marked among the number of marine plants. See plate LI. fig. 2.

It has been doubted by ſome authors of great credit, whether coral were properly a plant or not: ſome, with Dr. Woodward, make it a foſſile production, formed as cryſtals and ſpars are: others refer it to the animal tribe, of which opinion many of the french naturaliſts are at preſent. But as it is found to grow and to take its nouriſhment in the manner of plants, and to produce flowers and ſeeds, or at leaſt a matter analogous to ſeeds, there requires no farther argument to prove that it truly and properly is of the vegetable kind. Boccone diſcovered its nutritious juice lodged in cells under the bark or rind, and count Marſigli, the flowers and ſeeds.

The coral plant, called corallum by Tournefort, and iſis by Linnæus, and ranked by this laſt author among the *cryptogamia lithophytorum*, is of the ſame hardneſs and ſtony nature throughout, and that as well while growing under the water, as when it has been ever ſo long expoſed to the air. All that has given occaſion to the vulgar opinion of coral's being ſoft while in the ſea, is that it has a ſoft and thin coat of a cruſtaceous matter, covering it while it is growing, and which is taken off before it is packed up for uſe. It grows to ſtones, or any other ſolid ſubſtances, without a root, or without any way penetrating them as plants do the earth; and not only to rocks and ſtones, but to ſhells, old iron inſtruments, broken glaſs, earthen veſſels, and even to the bones of men lying at the bottom of the ſea; all theſe having been found with regular and fine plants of red coral growing from them.

The red coral is met with in apothecaries ſhops in ſmall branched pieces of the thickneſs of a packthread, of a pale red colour, and uſually ſtriated longitudinally on the ſurface. Theſe are the ſmall branches of the plant, the larger and finer pieces being uſed for beads and other toys, where a larger price is paid for them. Medical authors give us receipts for a great many preparations of coral, as magiſteries, tinctures, ſyrups and ſalts. At preſent, however, they are diſuſed, and we know it in the ſhops in no other form but that of the powder finely levigated, which is preſcribed as an aſtringent and abſorbent in diarrhœas, the fluor albus, *&c.* with other medicines of the ſame intention. We hear alſo of a white coral, and many ſuppoſe it to poſſeſs greater virtues than the red; but what we meet with in the ſhops under this name, is a ſpecies of another ſea-plant, the madrepora. See the article MADREPORA.

There is a black coral, of the ſame ſtony ſubſtance with the red, and as gloſſy as the blackeſt marble; but we ſee no ſuch thing in the ſhops: what is kept under this name, is a plant of a quite different genus, not of a ſtony but a tough and horny texture, and is the lythophyton deſcribed by authors under the name of lithophyton nigrum arboreum, and corallum nigrum officinarum. See the article CORALLINE.

CORAL *fiſhery*. Red coral is found in the Mediterranean, on the ſhores of Provence, from cape de la Couronne to that of St. Tropez; about the iſles of Majorca and Minorca; on the ſouth of Sicily; on the coaſts of Africa; and, laſtly, in the Ethiopic ocean, about cape Negro. The divers ſay, that the little branches are found only in the caverns whoſe ſituation is parallel to the earth's ſurface, and open to the ſouth. The manner of fiſhing being nearly the ſame wherever coral is found, it will ſuffice to inſtance the method uſed at the baſtion of France, under the direction of the company eſtabliſhed at Marſeilles for that fiſhery. Seven or eight men go in a boat commanded by the patron or proprietor, and when the net is thrown by the caſter, the reſt work the veſſel, and help to draw the net in. The net is compoſed of two rafters of wood tied croſs-wiſe, with leads fixed to them: to theſe they faſten a quantity of hemp twiſted looſely round, and intermingled with ſome large netting. This inſtrument is let down where they think there is coral, and pulled up again when the coral is ſtrongly intangled in the hemp and netting. For this purpoſe,

BRITISH MUSEUM

Fig. 1. CONVOLVULUS, or *BINDWEED*.



Fig. 2. CORAL.



Fig. 4. CORIS.



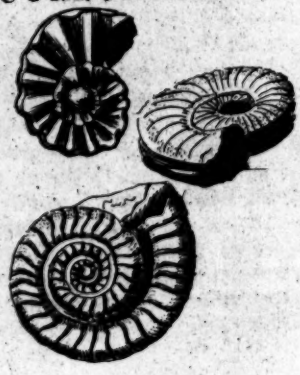
Fig. 3. CORALLINE.



Fig. 5. CORMORANT.



Fig. 6.
CORNUA *AMMONIS*.



T. Jefferys sculp.

poſe, ſix boats are ſometimes required; and if in hauling in, the rope happens to break, the fiſhermen run the hazard of being loſt. Before the fiſhers go to ſea, they agree for the price of the coral, which is ſometimes more, ſometimes leſs a pound; and they engage, on pain of corporal puniſhment, that neither they nor the crew ſhall embezzle any, but deliver the whole to the proprietors. When the fiſhery is ended, which amounts one year with another to twenty-five quintals for each boat, it is divided into thirteen parts, of which the proprietor hath four, the caſter two, and the other ſix men one each, the thirteenth belongs to the company for payment of the boat furniſhed them. Red or white coral in fragments, for phyſic, pays on importation $7\frac{75}{100}$d. the pound, and draws back on exportation $6\frac{80}{100}$d. Whole coral unpoliſhed, the pound, pays 3 s. $10\frac{50}{100}$d. and draws back 3 s. $4\frac{80}{100}$d. Whole coral poliſhed, the pound, pays 5 s. $1\frac{50}{100}$d. and draws back 4 s. $7\frac{80}{100}$d.

Artificial CORAL, is made of cinnabar well beaten; a layer whereof is applied on a piece of wood well dried and poliſhed, being firſt moiſtened with ſize: the whole is then again poliſhed, and for varniſh rub it over with the white of an egg.

CORAL-TREE, or CORAL-WOOD, erythrina, in botany. See ERYTHRINA.

CORALLINE, *corallina*, in botany, is a genus of ſubmarine plants, conſiſting of ſtalks and branches often beautifully ramified, and compoſed of joints of an oblong figure inſerted into one another. The greater part of theſe are gritty and of a coral-like matter, but nature varies from this in ſome of the ſpecies, which are of a ſofter ſubſtance. See plate LI. fig. 3.

It is frequent on our own coaſts, and what we uſe is in general of our own produce, though there is ſome of it brought from France and Holland. It is to be choſen freſh, of a ſtrong ſmell, and greeniſh or reddiſh colour. The antients extol much the virtues of coralline; at preſent, however, we uſe it only againſt worms, and it is generally mixed with worm ſeed, ſalt of ſteel, and other of the known anthilminthics.

Mr. Ellis, in an Eſſay towards a natural hiſtory of corallines, and other marine productions of the like kind, publiſhed in 1753, endeavours to prove that theſe ſea ſubſtances are only caſes or coverings for marine polypes. See POLYPE.

He tells us that he had an opportunity, on the iſland of Sheppey, of ſeeing thoſe diſputed beings, called branched corallines, alive in ſea-water, by the help of a very commodious microſcope, and was fully convinced that theſe apparent plants were ramified animals in their proper ſkins or caſes, not loco-motive, but fixed to ſhells of oyſters, muſcles, &c. and to fucus's. He had afterwards an opportunity of ſeeing thoſe corallines in motion, whoſe polypes are contained in cups, ſupported by a long ſtem that appears full of rings, or as if they were twiſted in form of a ſcrew.

CORALLUM, CORAL, in botany. See the article CORAL.

CORAM NON JUDICE, in law, is a term uſed where a cauſe is brought and determined in a court of which the judges there have not any juriſdiction.

CORAN, or ALCORAN. See the article ALCORAN.

CORBAN, a ſcripture term for an offering which had life, in oppoſition to that which had no life.

CORBAN is alſo a ceremony which the mahometans perform at the foot of mount Ararat, in Arabia, near Mecca. It conſiſts in killing a great number of ſheep, and diſtributing them among the poor.

CORBEILS, in fortification, the ſame with what we call baſkets. See BASKET.

CORBEL, in architecture, the repreſentation of a baſket, ſometimes ſeen on the heads of the coryatides.

It is ſometimes uſed to ſignify the vaſe of a tambour of the corinthian column.

CORBEL, or CORBEIL, is alſo uſed in building, for a ſhort piece of timber, placed in a wall, with its end ſticking out ſix or eight inches, as occaſion ſerves, in the manner of a ſhouldering piece. The under part of the end thus ſticking out, is ſometimes cut in the form of a boultin, ſometimes of an ogee, and ſometimes of a face, &c. according as the workman fancies.

CORBY, a town of Germany, thirty miles eaſt of Paderborn, in Weſtphalia; eaſt long. 9° 20′, north lat. 51° 40′.

CORCHORUS, JEWS-SALLAD, in botany, a genus of the polyandria-monogynia claſs of plants; the corolla of which conſiſts of five oblong, obtuſe petals; narroweſt at the bottom, erect, and of the length of the cup: the fruit is a very large, cylindric, accuminated pod, compoſed of five valves, ſometimes only of two, and contains five cells: the ſeeds are numerous, angular, and accuminated.

CORD,

CORD, or CHORD, ſeveral threads, cabled or twiſted together, by means of a wheel. See the article ROPE.

CORD *of St. Francis*, a ſort of rope, adorned with knots, wore by the brothers of the fraternity of St. Francis.

The cordeliers, capuchins, minorites, and recolets, wear a white rope: but others, as the pique-puces, wear it black.

The deſign of it is to commemorate the bands wherewith Chriſt was bound.

The ſociety of the cord includes a great number of people beſides religious. To obtain indulgences they are only obliged to ſay five Paters, five Ave Mary's, and five Gloria-patri's, and to wear this rope, which muſt firſt have been bleſſed by the ſuperiors of the order.

CORD *of wood*, a certain quantity of wood for burning, ſo called becauſe formerly meaſured with a cord. The dimenſions of a ſtatute cord of wood are eight feet long, four feet high, and four feet broad.

CORD-WOOD, new wood, and ſuch, as when brought by water, comes on board a veſſel, in oppoſition to that which is floated.

CORDAGE, a term uſed, in general, for all ſorts of cord, whether ſmall, middling, or great, made uſe of in the rigging of ſhips. See the article RIGGING.

Cordage, cable-laid, as the ſeamen term it, is made with nine ſtrands, *i. e.* the firſt three ſtrands are laid ſlack, and then three of them, being cloſed together, make a cable, or cablet. See CABLE.

The ſame for tacks, but they are laid tapering.

Cordage, hawſer-laid, is made only with three ſtrands.

Cordage-ſtays, are cable-laid, but made with four ſtrands, as cables are with three; with the addition of an heart, which goes through the center of them.

The price of cordage and cable at Peterſburgh, in 1742, was one rouble, twenty copecs the poude.

Cordage ſtuped, is that which, having been put in a tub in a very warm place, has caſt out its moiſture.

White cordage, is that which has not yet been tarred.

Cordage tarred in ſpinning, is that which is made of rope yarn ready tarred.

Cordage tarred in the ſtove, is that which has paſſed through hot tar, in coming out of the ſtove. Every quintal of cordage may take about twenty pounds of tar.

Cordage re-made, is that which is made of ropes uſed before.

Cordage, when very old, is uſed for oakum to chaulk the ſeams of ſhips. See the article OAKUM.

Change cordage, that which is kept in reſerve, in caſe what is in uſe fails.

When a rope is ſaid to be ſix inches, it is underſtood of its circumference. A rope of ſixty threads, is one compoſed of ſo many rope yarns.

Cordage is uſually made of ſpun hemp: the great number of veſſels built and fitted out at Amſterdam, either for war or trade, occaſion a great commerce of all ſorts of cordage neceſſary for them, all which ſells by the ſchippont of three hundred pounds. The ſchippont of cordage of neat hemp coſts uſually fifty-ſix florins; that of Muſcovy, from thirty to forty-ſeven. Deductions for weight and prompt payment are one *per cent.* on each.

The quantity of cordage uſed in rigging a veſſel, is almoſt inconceivable. Every rope hath its name and particular uſe. As the quantity of cordage is ſo very extraordinary that is uſed in our own veſſels and ſhipping, both at home and abroad, and as alſo the quantities uſed by all the Europeans, Americans, and Aſiatics, is immenſely great, too much encouragement cannot be given to the growth of hemp in our own colonies and plantations, to the end that we might, by that means, at leaſt, amply ſupply ourſelves, if we could not obtain any ſhare in the ſupply of other nations.

CORDATED, an appellation frequently given by naturaliſts to things ſomewhat reſembling a heart.

CORDED, in heraldry. A croſs-corded ſome authors take for a croſs wound or wrenched about with cords. See the article CABLED.

Others, with more probability, take it for a croſs made of two pieces of cord.

CORDELERAS, mountains of South America, otherwiſe called Andes. See the article ANDES.

CORDELIER, in church-hiſtory, a franciſcan or religious of the order of St. Francis. See the article CORD.

The cordeliers are enjoined to live in common: thoſe who are admitted into the order, are firſt to ſell all they have and give it to the poor. The prieſts are to faſt from the feaſt of all ſaints till the nativity.

CORDIA, SEBESTEN, in botany, a genus of the pentandria-monogynia claſs of plants, the corolla of which is formed of a ſingle petal, of an infundibuliform

ſhape;

ſhape: the fruit is a dry, globoſe, acuminated drupe, covered with the cup: the ſeed is a ſulcated nut, containing two cells. The fruit of the ſebeſten is an attenuant and reſolvent, and has been frequently given in peripneumonies, in diſeaſes of the breaſt and lungs in general, and in ſtranguries and hoarſeneſs, but now it is much grown out of uſe.

CORDIAL, in medicine, whatever raiſes the ſpirits, and gives them a ſudden ſtrength and chearfulneſs.

In order to underſtand the operation of this upon a human body, it is neceſſary to conſider that a languor, or faintneſs, muſt either by the conſequence of too much exerciſe, too long watching, or too great a hurry of the animal functions, as in ſome diſtempers; all which do ſo far diſſipate the nervous fluid, or animal ſpirits, as that the ſolids cannot repear, with wonted vigor, their neceſſary motions: or ſuch depreſſions muſt ariſe from the obſtruction of ſome natural evacuation, and generally that of perſpiration; from external cold, which lays a load upon the conſtitution. In both theſe caſes the manner in which a cordial acts is the ſame, ſince it muſt produce its effects by adding to the ſpringineſs and force of the fibres; and as this change is moſt remarkable from ſpirituous liquors, it may be of uſe to examine how they come to obtain ſuch a denomination; and this muſt ariſe from their ſubtilty and fineneſs of parts; ſo that the more ſpirituous any thing is that enters the ſtomach, the ſooner one feels its cordial effects: for that increaſe of vigour which a man obtains from common food, though the moſt natural and durable, is not immediately obtained in ſuch a degree, as to get the appellation of cordial, ſince it muſt paſs through ſeveral comminutions before it arrive to ſuch a fineneſs as to be diſperſed to the nerves; whereas a ſpirituous ſubſtance enters into the nerves as ſoon as it touches them, whereby their vibrations are invigorated, and all ſenſe of faintneſs removed. In like manner volatiles, the effluvia of flowers, fruits, and all things deemed cordials, operate upon the organs of ſmelling.

CORDIS CAPSULA, FOVEA, MUCRO, SEPTUM, &c. See the articles HEART, CAPSULA, FOVEA, MUCRO, &c.

CORDON, in fortification, a row of ſtones, made round on the outſide, and ſet between the wall of the fortreſs, which lies aſlope, and the parapet which ſtands perpendicular, after ſuch a manner, that this difference may not be offenſive to the eye: whence the cordons ſerve only as an ornament, ranging round about the place, being only uſed in fortification of ſtone-work. For in thoſe made with earth, the void ſpace is filled up with pointed ſtakes.

CORDOUA, or CORDOVA, a city of Andaluſia, in Spain, ſituated on the river Guadalquivir, ſeventy two miles north-eaſt of Seville, and ſeventy-five north of Malaga: weſt longitude 4° 45′, and north latitude 37° 45′.

It is a large city, ſaid to contain 14,000 families, and has a good trade in wine, ſilk, and leather: it is likewiſe a biſhop's ſee.

CORDOUAN TOWER, a remarkable high houſe at the mouth of the river Garonne, in France: weſt long. 1° 15′, and north lat. 45° 35′.

CORDWAINERS, a term whereby ſhoemakers are denominated in ſtatutes. By a ſtatute of Jac. I. the maſter and wardens of the cordwainers company, &c. are to appoint ſearchers and triers of leather; and no leather is to be ſold, before ſearched, ſealed, &c.

COREA, an iſland or peninſula on the north-eaſt coaſt of China, between 36° and 42° of north latitude.

CORED HERRINGS, thoſe caught in autumn on the coaſt near Yarmouth; which, being rolled in ſalt, are afterwards brought on ſhore to be made red-herrings.

COREGONUS, in ichthyology, a genus of malacopterygious fiſhes, with eight or ten oſſicles or little bones in the branchioſtege membrane, and extremely ſmall teeth. Under this genus are comprehended the lavaretus, albula-minor, thymallus, coregonoides, and wimba.

COREIA, in antiquity, a feſtival in honour of Proſerpine.

COREOPSIS, in botany, a genus of the ſyngeneſia-polygamia-fruſtranea claſs of plants, the compound flower of which is radiated, and conſiſts both of hermaphrodite and female ones; the former are numerous, ſituated on the diſk, and tubuloſe; and the latter ligulated, and only eight in number: add to this, that the former are divided into five, and the latter only into four ſegments at the limb: the ſtamina are five very ſhort, capillary

filaments; and the ſeeds are ſolitary, orbiculated, and contained in the cup.

CORFE-CASTLE, a borough-town of Dorſetſhire, about twelve miles eaſt of Dorcheſter, near the ſea: weſt long. 2° 10′, and north lat. 50° 36′.

It ſends two members to parliament.

CORFU, an iſland ſubject to the Venetians, ſituated in the Mediterranean, near the entrance of the gulph of Venice.

CORFU is alſo the capital of the above iſland: eaſt long. 20° 40′, and north lat. 39° 40′.

CORIA, a city of Eſtremadura, in Spain, thirty-five miles north of Alcantara: weſt long. 6° 40′, and north lat. 39° 55′.

It is a biſhop's ſee.

CORIANDER, *coriandrum*, in botany, a genus of the pentandria digynia claſs of plants, the general corolla of which is difform and radiated; the proper flowers of the diſk are hermaphrodites, and compoſed of five unequal, inflexo-cordated petals: the ſtamina are five ſimple filaments; and the fruit is a ſpherical, ſtriated berry, containing two hemiſpherical ſeeds.

Coriander-ſeeds are accounted ſtomachic and good in flatulencies; and head-aches occaſioned thereby: they are alſo ſaid to diſcuſs ſtrumæ, and ſtop hæmorrhages and fluxes.

CORIARIA, MYRTLE-SUMACH, in botany, a genus of the decandria-pentagynia of Linnæus, whoſe corolla conſiſts of five petals, very like the cup. It has no pericarpium: the ſeeds are five, kidney-ſhaped, and incloſed in the petals.

CORIDOR, or CORRIDOR, in fortification, the ſame with covert-way. See the article COVERT-WAY.

CORINTH, a city of european Turky, ſituated near the iſthmus into the Morea, about fifty miles weſt of Athens, in 23° eaſt long. and 37° 30′ north lat.

CORINTHIAN, in general, denotes ſomething belonging to Corinth: thus we ſay, corinthian order, corinthian braſs, *&c.*

CORINTHIAN ORDER, in architecture, the fourth order of architecture, according to Scamozzi; but Mr. Le Clerc makes it the fifth, being the moſt noble, rich and delicate of all the five. See plate LII.

Moſt authors aſcribe the invention of this order to Callimachus, a corinthian ſculptor. Vilalpandus, however, oppoſes this opinion, and will have the corinthian capital to have been derived from an order in Solomon's temple, the leaves whereof were thoſe of the palm-tree. The corinthian order has ſeveral characters by which it is diſtinguiſhed from the reſt. Its capital is adorned with two rows of leaves, between which ariſe little ſtalks, or caulicoles, of which the volutes are formed, which ſupport the abacus, and are ſixteen in number. See ABACUS.

It has no ovalo, nor even abacus, properly ſpeaking; for the member which goes by that name, is quite different from the abacus of the other orders, being cut with a ſweep, in the middle of which is carved a roſe, or other ornament. See ARCHITECTURE and ORDER.

Vitruvius obſerves, that the corinthian order has no particular ordonnance for its corniche, or any of the other ornaments of its entablature; nor does he give it any other proportions than thoſe of the ionic order: ſo that if it appears higher than the ionic, it is purely owing to the exceſs of the height of its capital. See the article IONIC and CAPITAL.

He alſo makes the reſt of the entablature the ſame; and likewiſe uſes the attic baſe indifferently for the one and the other. But Vitruvius differs widely in this order from all the examples of antiquity now remaining, the moſt beautiful of which have a particular baſe, and the whole order twenty modules high, whereas the ionic has but eighteen.

Again, its capital is higher than that of Vitruvius, by one third of a module; and its entablature, which has modillions and ſometimes dentils together with the modillions, is very different from the ionic entablature.

Moſt modern architects paſs by Vitruvius's corinthian order, and follow that of the antient buildings; and ſelect from them, according to their ſeveral taſtes; ſo that the modern corinthian is a kind of compoſite, differing from many of the antient buildings, and much more from Vitruvius. Vignola and Mr. Le Clerc made the corinthian order twenty modules in height, yet Serlio makes it but eighteen; and M. Perrault eighteen two thirds, retrenching ſomething from the nineteen of Vetruvius. M. Perrault makes the height of the ſhaft leſs than that of the ionic, by reaſon of the exceſs of its capital.

The CORINTHIAN *column by equal parts.*

The corinthian pedeſtal, being in height three diameters, is divided into four, allowing one to the baſe, whoſe plinth is

BRITISH MUSEUM

CORINTHIAN ORDER.

Origin of the Capital.

a *being the* Abacus.

b *the* Acanthus.

c *the* Vaſe.



Corniche

Frieze

Architrave

Capital

Shaft

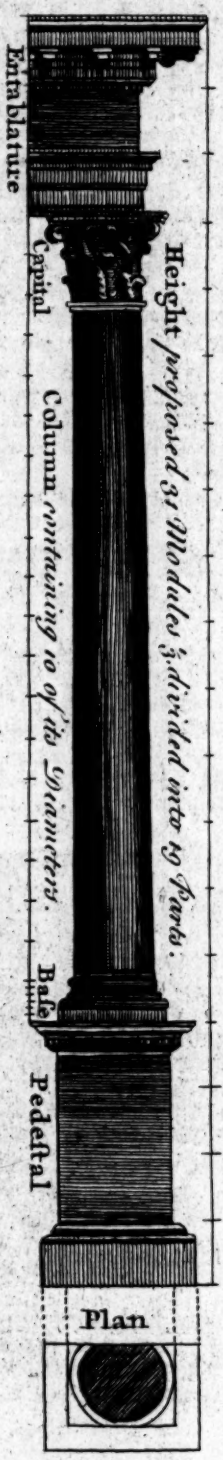
Baſe

Corniche

Dye

Baſe

Order intire.



Plan

T. Jefferys sculp.

two thirds of it; the other part is divided into nine, allowing two and a half to the torus, a half part to the fillet, three to the cimatium, a half part to the fillet, and two and a half to the ogee; and the breadth of the dye is a diameter, and two thirds.

The height of the base of the column is half a diameter, which is divided into six, allowing three fourths to the plinth, one to the lower torus, one fourth to the fillet, a half part to the scotia, one to the astragals and fillets, a half part to the scotia, one fourth to the fillet, and the other three fourths to the torus.

For the corinthian capital, divide the diameter into six parts, and take seven such parts for the height, allowing two to each height of the leaves, whose heads turn down half a part of it; allow another part for the stalks, whose heads turn down one third of it; three fourths to the small volutes, and one fourth to the fillet; the large volute is as high as the said fillet; a half part to the hollow, and a half part to the ovolo, whose fillet has one third of it.

The architrave is divided into nine parts, allowing one and a half to the first face, one and one fourth to the small bead, two to the second face, three fourths to the small ogee, two and a half to the third face, a half part to the bead, one to the ogee, and a half part to the fillet. The height of the entablature is two diameters, and is divided into six parts, two of which go to the architrave, one and a half to the frieze, and two and a half to the corniche.

The corniche is divided into twelve parts, allowing one and one fourth to the ogee, one fourth to the fillet, one and one fourth to the dentils, one fourth to the fillet, one fourth to the ovolo, one fourth to the fillet, two to the modillions, a half part to the ogee, and one fourth to the fillet; one and three fourths to the corona, three fourths to the cima reversa, one fourth to the fillet, one and a half to the cima recta, and a half part to the fillet.

The projection of the base of the corinthian pedestal is equal to its height; the upper fillet has three of these parts, and the lower fillet seven: the height of its corniche is half the base, being one eighth of the whole height; and is divided into eleven, by allowing one and a half to the ogee, a half part to the fillet, three to the cimatium, three to the corona, two to the ogee, and one to the fillet. The projection of the fillet has two of these parts; the bimatium, four and a half; the corona, six and a half; and the whole eight and a half.

The projection of the base of the column is one fifth of the diameter; and the upper fillet has one of these six parts; the upper torus, and the lesser fillets have one and a half; and one and three fourths are allowed to the astragals and lower fillet.

For the projection of the capital, make a square, each side being a diameter and half, and draw diagonals; and towards each angle, mark a diameter from the center, and draw the cants at right angles with the said diagonals. Then from the curvature of the abacus, make an equilateral triangle (the part of the square cut off by the cants being the base) and the opposite angle the center. In the circumference of the column are eight leaves, each leaf having four plants, and each plant five raffles. The projection of their head is found by a straight line from the abacus to the colarino. The rose is as high as the volute, and projects to the side of the foresaid square.

In the projection of the architrave; the second face has one fourth of a part; the third face, one of those parts; and the whole, two.

As for the projections of the corniche, the ogee is one half of these parts, and the dentils two and a half; the dentils are in breadth two thirds of their height, and the spaces two thirds of their breadth. The modillions project three and three fourths, and its breadth is one fifth of the diameter, and one being in the center gives the spaces. The returned modillions, eight and a half; the cap, nine; the corona, nine and a half; the cima reversa, ten and a half; and the whole, twelve, being equal to the height. See the figure.

CORINTHIAN BRASS. See BRASS.

CORIS, in botany, a genus of the pentandria-monogynia class of plants, the corolla of which consists of a single petal of the ringent kind; the tube is cylindric, and of the length of the cup; the limb is plane, and divided into five oblong, obtuse, emarginated segments; the two upper ones short, and more distant from one another; the fruit is a globose capsule, formed of five valves, and situ-

ated in the bottom of the cup; the ſeeds are ſmall, numerous, and oval. See plate LI. fig. 4.

CORISPERMUM, in botany, a genus of the monandria digynia claſs of plants, whoſe corolla conſiſts of two compreſſed, crooked, pointed petals, equal in ſize, and placed oppoſite one another: its fruit is a roundiſh capſule, compreſſed, bilocular, and having a furrowed edge; the ſeeds are of an oblong figure, and ſtand ſingle.

CORK, or CORK-TREE, *ſuber*, in botany, makes a diſtinct genus of trees according to Tournefort, but is comprehended under quercus by Linnæus. See the article QUERCUS.

In order to peel off the bark, which is the only part that conſtitutes the ſubſtance known by the name of cork, they make an inciſion round both the top and root of the tree, and another longitudinally; and when it is thus got off, they unwarp it before the fire, and preſs it even with weights. This they do once in two or three years, without any prejudice to the tree; provided, however, it be done in a dry ſeaſon, as rainy weather is accounted extremely prejudicial.

The cork ſhould be choſen in fine boards, all of a piece, not full of knots or chinks, of a moderate thickneſs, yelloviſh without and within, and that which cuts even.

Its uſe is too well known to need any account of it: in medicine it is of ſervice to ſtop bleeding, being reduced to powder, or put into ſome aſtringent liquor: burned and mixed with the unguentum populneum, it is very proper for the piles.

The Spaniards burn cork into an extraordinary fine black, called ſpaniſh black, which is uſed for ſeveral ſorts of work.

CORK, or CORKING *of a ſaddle*, the pieces to which the bolſtars are made faſt; ſo called as having formerly been made of cork.

CORK, in geography, the capital of a county of the ſame name, in Ireland, and province of Munſter, ſituated on the river Lee, about fifty miles ſouth of Limerick: weſt longitude 8° 25′, and north latitude 41° 40′.

It is a port-town, and equals any town in Ireland, except Dublin, in trade; and is a biſhop's ſee.

CORMANDEL-COAST, comprehends the eaſtern coaſt of the hither India, bounded by Golconda on the north, the bay of Bengal on the eaſt, Madura on the ſouth, and Biſnagar on the weſt; it lies between 10° and 20° north lat.

CORMORANT, in ornithology, the engliſh name of a ſpecies of pelican, with fourteen long feathers in the tail, and the under part of the body whitiſh: it is a ſea-fowl, almoſt equal to a gooſe in ſize, and feeds on fiſh. All the writers on birds have deſcribed it under the names of carbo aquaticus, or corvus aquaticus. See plate LI. fig. 5.

CORN, in country affairs, the grain or ſeeds of plants, ſeparated from the ſpica, or ear, and uſed for making bread.

There are ſeveral ſpecies of corn, ſuch as wheat, rye and barley, millet and rice, oats, maize and lentils, peaſe, and a number of other kinds, each of which has its uſefulneſs and propriety. See the articles, WHEAT, RYE, BARLEY, &c.

Corn is very different from fruits, with reſpect to the manner of its preſervation, and is capable of being preſerved in public granaries for preſſing occaſions, and of being kept for ſeveral centuries. See the article GRANARY.

The firſt method is to let it remain in the ſpike; the only expedient for conveying it to the iſlands and provinces of America. The inhabitants of thoſe countries ſave it in the ear, and raiſe it to maturity by that precaution: but this method of preſerving it, is attended with ſeveral inconveniencies among us; corn is apt to rot or ſprout, if any the leaſt moiſture is in the heap, the rats likewiſe infeſt it, and our want of ſtraw alſo obliges us to ſeparate the grain from the ear. The ſecond is to turn and winnow it frequently; or to pour it through a trough or mill-hopper, from one floor to another; being thus moved and aired every fifteen days, for the firſt ſix months, it will require leſs labour for the future, if lodged in a dry place: but if, through neglect, mites ſhould be allowed to ſlide into the heap, they will ſoon reduce the corn to a heap of duſt: this muſt be avoided by moving the corn anew, and rubbing the places adjacent with oils and herbs, whoſe ſtrong odour may chace them away; for which garlic and dwarf-elder are very effectual: they may likewiſe be expoſed to the open ſun, which immediately kills them. When the corn has been preſerved from all impurities for the ſpace of two years, and has exhaled all its fires, it may be kept for fifty or even a hundred years, by lodging it in pits, covered with ſtrong planks, cloſely joined together: but

but the ſafer way is to cover the heap with quick-lime, which ſhould be diſſolved by ſprinkling it over with a ſmall quantity of water; this cauſes the grains to ſhoot to the depth of two or three fingers, and incloſes them with an incruſtation, through which neither air nor inſects can penetrate.

Corn not exceeding the under-mentioned prices, ſhall have the following bounties per quarter, *&c.*

	Price per Qr. l. s.	Bounty per Qr. s. d.
Wheat	2 8	5 0
Rye	1 12	3 6
Barley and malt	1 4	2 6
Oatmeal	0 15	2 6

In France, corn of the growth of the kingdom is reckoned a contraband commodity.

CORN-MILL, a water-engine for grinding of corn. See MILL and GRINDING.

Sharping CORN. See SHARPING.

CORN likewiſe makes the firſt part of the engliſh name of ſeveral plants, on account of their growing among corn: thus we call the *cyanus*, corn-bottle; the *gladiolus*, corn-flag; the *chryſanthemum*, corn-marygold; the *ſium*, corn-parſley; the *valerianella*, corn-ſallet; the *campanula*, corn-violet, *&c.* See the articles CYANUS, GLADIOLUS, *&c.*

CORN, in medicine and ſurgery, a hard tubercle like a flat wart, growing in ſeveral parts of the feet, eſpecially upon the joints of the toes. This diſorder is not unjuſtly attributed to the wearing of too ſtrait or narrow-toed ſhoes, which never fail to produce theſe tubercles, eſpecially if the perſon is obliged to ſtand or walk much, and in the ſummer-time.

Various are the methods uſed for removing theſe calloſities of the ſkin and cuticle; ſome by knife, and others by application of emollient and cauſtic or eroding medicines; but which way ſoever they are removed, it is certainly the beſt to let their hard ſubſtance be firſt ſufficiently mollified, and this may be obtained by frequently macerating them for a conſiderable time in warm water, and afterwards paring off their uppermoſt ſurface with a pen-knife: or if this does not ſuffice, let a plaſter of green wax, gum ammoniac. de ſapon. *&c.* or a leaf of houſeleek be applied, and renewed every day; when theſe applications have been continued for ſome time, peel them away with your nails, or ſcrape them with a ſcalpel, but with great caution, to avoid injuring any of the ſubjacent tendons of the extenſor muſcle, which might occaſion violent pains, inflammation, convulſions, a gangrene, and even death; all which have alſo been frequently the conſequences of cauſtics penetrating to thoſe parts.

CORNACHINE-POWDER, the ſame with what is ſometimes called the earl of Warwick's powder, and pulvis de tribus. This is a purging powder, and made thus: take of ſcammony, prepared with the fumes of ſulphur, two ounces; diaphoretic antimony, one ounce; the cryſtals of tartar, half an ounce: make them altogether into a powder. It is a ſmart purge, and frequently given to children, againſt worms, from five to fifteen grains; and to adults from fifteen grains to half a dram.

CORNAGE, an antient tenure, the ſervice whereof was to blow a horn, when any invaſion of the Scots was perceived.

This tenure was very frequent in the northern counties near the Picts wall.

CORNEA TUNICA, in anatomy, the ſecond coat of the eye, ſo called from its ſubſtance, which reſembles the horn of a lanthorn. See the article EYE.

The cornea is convex, pellucid, and diviſible into various lamellæ. It is ſituated in the fore part of the eye, and ſurrounded by the ſclerotica. It has a moſt exquiſite ſenſe, to the end that the tears, upon the leaſt pain, may be ſqueezed out of the lachrymal gland, to waſh off any filth, which, by ſticking to the cornea, might render it dim.

CORNEL-TREE, *cornus*, in botany. See the article CORNUS.

CORNELIAN, *ſarda*, the ſame with carnelian. See CARNELIAN.

CORNELIAN-CHERRY, a name ſometimes given to a ſpecies of cornel-tree.

CORNER, *angulus*, in a general ſenſe, the ſame with angle. See ANGLE.

CORNERS, or ANGLES, *of the volte*, in the manege, the extremities of the four lines of the volte, when you work in a ſquare.

CORNER-TEETH *of a horſe*, the four teeth placed between the middling teeth and the tuſhes, being two above and two below, in each ſide of the jaw, which ſhoot forth when the horſe is four years and a half old.

CORNER-STONES, among builders, the two ſtones which ſtand one in each jaumb of a chimney. The breadth of each ſtone ought to be equal to that of the jaumb, and its face to be hollowed in the ſweep of a circle; their height ought to reach from

from the hearth to the mantle-tree: they are commonly made of Ryegate or free-ſtone.

CORNET, in the military art of the antients, an inſtrument much in the nature of a trumpet, which when it only ſounded, the enſigns were to march alone, without the ſoldiers; whereas, when the trumpet only ſounded, the ſoldiers were to move without the enſigns. The cornets and buccinæ ſounded the charge and retreat, and the cornets and trumpets ſounded during the courſe of the battle.

CORNET, in the military art of the moderns, the third commiſſion-officer in a troop of horſe or dragoons.

This is a very honourable poſt: he commands in the lieutenant's abſence; his principal duty being to carry the ſtandard, near the middle of the firſt rank of the ſquadron.

CORNEUS, the name by which Linnæus calls a kind of tin ore, found in black columns, with irregular ſides, and terminating in priſms. See TIN.

CORNICHE, CORNISH, or CORNICE, in architecture, the uppermoſt member of the entablature of a column, as that which crowns the order. The corniche is the third grand diviſion of the trabeation, commencing with the frieze, and ending with the cymatium. The corniche is different in different orders, there being as many kinds of corniches as there are different orders of columns. It is moſt plain in the tuſcan order. Vignola makes it conſiſt of an ovum or quarter-round, an aſtragal or baguette, the reglet or fillet, the larmier, and the talon. See the article TUSCAN ORDER.

In the ionic, the members are in moſt reſpects the ſame as in the doric, except that they are frequently enriched with carvings, and have always dentils. See the article IONIC ORDER.

In the doric, Vignola makes the capitals of the triglyphs of the frieze, with their bandeletters, a talon, mutules or dentils, a larmier with its guttæ underneath, a talon, fillet, cavetto, and reglet. See the article DORIC ORDER.

The corinthian corniche is the richeſt and is diſtinguiſhed by having both modillions and dentils, contrary to the opinion of Vitruvius, who looks upon theſe two ornaments as incompatible; and of Mr. Le Clerc, who accounts the dentils as peculiar to the ionic. See the articles CORINTHIAN ORDER and MODILLION.

In the compoſite there are dentils, its mouldings carved, and there are channels under the ſoffit. See the article COMPOSITE ORDER.

For the height and projectures of the corniches in the ſeveral orders, Goldman makes the height of the tuſcan $1\frac{1}{3}$, and its projecture $2\frac{2}{3}$ modules; the height of the doric $1\frac{1}{3}$, and its projecture $2\frac{2}{3}$; height of the ionic $1\frac{3}{5}$, its projecture $2\frac{2}{3}$; height of the corinthian $1\frac{2}{3}$ its projecture $2\frac{13}{30}$; height of the compoſite $1\frac{3}{5}$, its projecture $2\frac{13}{30}$.

CORNICHE is alſo uſed, in general, for all little projectures in maſonry or joinery, even where there are no columns, as the corniche of a chimney, beaufet, &c.

Architrave-CORNICHE, that immediately contiguous to the architrave, the frieze being retrenched.

Mutilated-CORNICHE, one whoſe projecture is cut, or interrupted to the right of the larmier: or reduced into a platband, with a cimatium.

Cantaliver-CORNICHE, a term uſed by workmen for a corniche that has cantalivers underneath. See CANTALIVERS.

Coving-CORNICHE, that which has a great caſement or hollow in it, ordinarily lathed and plaſtered upon compaſs-ſprechets, or brackets.

Modillion-CORNICHE, one with modillions under it. See the article MODILLION.

CORNICHE is alſo uſed for the crownings of pedeſtals. See the article PEDESTAL.

CORNICHE-RING, of a piece of ordnance, is that next from the muzzle-ring, backward. See the article CANNON.

CORNICULARIS PROCESSUS, the proceſs or knob of the ſhoulder-bone, called thus becauſe it reſembles the figure of a crow's beak.

CORNICULARIUS, in roman antiquity, an officer of the army, appointed to aſſiſt the military tribune in quality of lieutenant.

They went the rounds inſtead of the tribune, viſited the watch, and were moſtly the ſame with what the aids-major are in the french army: they had their name from a little horn they made uſe of, in giving their orders to the ſoldiers.

CORNICULATE, or CORNICULATED FLOWER, one with a ſharp-pointed appendage, reſembling, in ſome degree, a cock's ſpur.

CORNICULATE PLANTS, the ſame with ſiliquoſe plants with horned pods, or ſeed-veſſels.

CORNISH,

CORNISH, or CORNICHE, in architecture. See the article CORNICHE.

CORNISH RING, the ſame with aſtragal. See the article ASTRAGAL.

CORNIX, in ornithology, the name by which authors call ſeveral ſpecies of corvus, *viz.* the common crow, the royſton crow, the bluiſh crow or roller, and the rook. See CORVUS and CROW.

CORNU, HORN, in phyſiology. See HORN.

CORNU AMMONIS, or HAMMONIS, in natural hiſtory, a genus of foſſil ſhells, called ſerpent-ſtones, or ſnake-ſtones, by the vulgar.

They are found of all ſizes, from the breadth of a ſix-pence to more than two feet in diameter; ſome of them rounded, others greatly compreſſed, and lodged in different ſtrata of ſtones and clays; ſome again are ſmooth, and others ridged in different manners, their ſtriæ and ridges being either ſtraight, irregularly crooked, or undulated. See plate LI. fig. 6.

The cornua ammonis undoubtedly belong to the cochlea-kind of ſhells. See the article COCHLEA.

CORNU CERVI, HART'S HORN, in the materia medica. See HART'S HORN.

CORNUCOPIA, or HORN *of plenty*, among painters, *&c.* is repreſented under the figure of a large horn, out of which iſſue fruits, flowers, *&c.* Upon medals the cornucopia is given to all deities, genii, and heroes, to mark the felicity and abundance of all the wealth procured by the goodneſs of the former, or the care and valour of the latter.

CORNUCOPIÆ, in botany, a genus of the triandria-digynia claſs of plants, the flower of which is univalvular; there is no pericarpium, but the corolla incloſes a ſingle turbinated ſeed, convex on one ſide, and plane on the other.

CORNUS, the CORNEL TREE, in botany, a genus of plants belonging to the tetrandria-monogynia claſs, the flower of which conſiſts of four oblong, acute, plane petals; the fruit is a roundiſh umbilicated drupe; the ſeed a cordated or oblong nut, with two cells. See plate LIII. fig. 2.

The fruit of this tree is cooling, drying, and aſtringent; ſtrengthens the ſtomach, ſtops all kinds of fluxes and looſeneſs, and is good in fevers, eſpecially if attended with a diarrhœa.

CORNUTIA, in botany, a genus of the didynamia-angioſpermia claſs of plants, the flower of which is monopetalous and ringent; the limb quadrifid, the upper ſegment being erect and roundiſh, the lateral one diſtinct, and the lower roundiſh and entire: the fruit a globoſe berry, with a reniform ſeed.

CORNWAL, the moſt weſterly county of England, which gives the title of duke to the prince of Wales.

It ſends forty-four members to parliament.

CORODY, in our law, ſignified antiently a ſum of money, or allowance of meat, drink, and cloathing, that was due to the king from an abbey, or other houſe of religion, of which he was founder, towards the ſuſtenance of ſuch of his ſervants as he thought proper to beſtow it upon.

COROLLA, among botaniſts, the moſt conſpicuous part of a flower, ſurrounding the organs of generation, and compoſed of one or more flower-leaves, moſt commonly called petals, to diſtinguiſh them from the leaves of the plant: according as there is one, two, or three of theſe petals, the corolla is ſaid to be monopetalous, dipetalous, tripetalous, *&c.* See the articles FLOWER, PETAL, *&c.*

COROLLARY is an uſeful conſequence drawn from ſomething already advanced or demonſtrated: thus it being demonſtrated that a triangle which has two equal ſides, has alſo two angles equal; this corollary will follow, that a triangle which has three ſides equal, has alſo its three angels equal.

COROLLISTS, *corolliſtæ*, an appellation given by Linnæus to thoſe botaniſts, who have arranged plants under diſtinct claſſes according to the different form of their corollæ or flowers; ſuch is the celebrated Tournefort and Rivinus. See the article BOTANY.

COROLLULA, a term uſed by botaniſts, to expreſs the little partial flowers, which together make up the compound ones.

Theſe corollulæ are of two kinds, the tubulated and ligulated; the former whereof are always furniſhed with a campanulated limb, divided into four or five ſegments; and the latter have only a flat linear limb, terminated by a ſingle point, or by a broader extremity, divided into three or five ſegments. See FLOWER.

CORONA, CROWN, or CROWNING, in architecture. See CROWNING.

CORONA, among anatomiſts, denotes that edge of the glans penis where the præputium begins. See PENIS, *&c.*

CORONA, among botaniſts, expreſſes any thing growing on the head of a ſeed.

Theſe coronæ are of various kinds: ſometimes ſimple, conſiſting only of a dentated

dentated membrane: ſometimes pappoſe, conſiſting of downy matter; which, in ſome caſes, is immediately affixed to the ſeed; in others it has a pedicle growing from it; and it ſometimes is compoſed of ſimple filaments, and ſometimes is ramoſe. Hence, in the deſcription of the ſeeds of plants, they are frequently ſaid to be crowned or winged with down: the uſe of this part being evidently to ſcatter and diſperſe the ſeeds, when ripe.

CORONA BOREALIS, the NORTHERN CROWN, or GARLAND, in aſtronomy, a conſtellation of the northern hemiſphere, whoſe ſtars in Ptolemy's catalogue are 8, in Tycho's as many, and in Mr. Flamſtead's 21.

CORONA MERIDIONALIS, a ſouthern conſtellation, conſiſting of thirteen ſtars.

CORONA CLERICALIS, the ſame with coif. See the article COIF.

CORONA IMPERIALIS, in natural hiſtory, a beautiful ſhell of the voluta kind, diſtinguiſhed by certain eminences forming a ſort of crown. See VOLUTA.

CORONÆ JUS. See the article JUS.

CORONÆ PLACITORUM CUSTOS. See the article CUSTOS.

CORONAL, *coronalis*, in anatomy, the firſt ſuture of the ſkull. See the articles SUTURE and SKULL.

This ſuture reaches tranſverſely from the one temple to the other, and joins the os frontis with the oſſa parietalia.

CORONALE OS, in anatomy, the ſame with the os frontis. See FRONTIS.

CORONARIA, in botany, a genus of the decandria-pentagynia claſs of plants, the corolla of which conſiſts of five petals, their ungues being of the length of the cup, and increaſed by a margin: the fruit is a cylindric capſule, containing one cell, and opening at the top: the ſeeds are numerous and roundiſh.

CORONARY VESSELS, *vaſa coronaria*, in anatomy, certain veſſels which furniſh the ſubſtance of the heart with blood.

CORONARY ARTERIES, are two arteries ſpringing out of the aorta, before it leaves the pericardium.

CORONARY VEIN, a vein diffuſed over the exterior ſurface of the heart. It is formed of ſeveral branches ariſing from all parts of the viſcus, and terminates in the vena cava, whither it conveys the remains of the blood brought by the coronary arteries.

Stomachic CORONARY, a vein inſerted into the trunk of the ſplenic vein; which, by uniting with the meſenteric, forms the vena porta. See the article PORTA.

CORONATION, the public and ſolemn confirming the title, and acknowledging the right of governing to a king or queen; at which time the prince ſwears reciprocally to the people, to obſerve the laws, cuſtoms and privileges of the kingdom, and to act and do all things conformable thereto. See the articles KING, &c.

CORONATORE ELIGENDO, in law, a writ that lies directed to the ſheriff, out of the court of chancery, on the death or diſcharge of any coroner, commanding him to call the freeholders of the county, for the election of a new coroner, and to certify to the ſaid court both the election and the name of the party choſen, and to adminiſter his oath to him, &c.

CORONATORE EXONERANDO, a writ that lies for the diſcharge of a coroner on account of negligence of his duty, or inſufficiency.

CORONE, in anatomy, the anterior apophyſis of the lower jaw. See JAW.

CORONER, an antient officer of this kingdom, ſo called becauſe he is wholly employed for the king and crown.

The office of coroners eſpecially concerns the pleas of the crown; and they are conſervators of the peace in the county where elected, being uſually two for each county. Their authority is judicial and miniſterial: judicial, where a perſon comes to a violent death; to take and enter appeals of murder, pronounce judgment on outlawries, &c. and to enquire into the lands, goods, and eſcape of murderers, treaſure-trove, wreck of the ſea, deodands, &c. The miniſterial power is when coroners execute the king's writs, on exception taken to the ſheriff, as being party in a ſuit, of kin to either of the parties, or on the default of the ſheriff, &c. The authority of the coroner does not terminate on the demiſe of the king, as that of judges, &c. does, who act by the king's commiſſion. On default of ſheriffs, coroners are to impannel juries, and to return iſſues on juries not appearing, &c.

CORONET. See the article CROWN.

CORONET, or CRONET *of a horſe*, the loweſt part of the poſtern, which runs round the coffin, and is diſtinguiſhed by the hair joining and covering the upper part of the hoof.

CORONILLA, HATCHET-VETCH, in botany, a genus of the diadelphia-decandria claſs of plants, whoſe corolla is papiliona-

ceous;

Fig. 1. COLUBER.

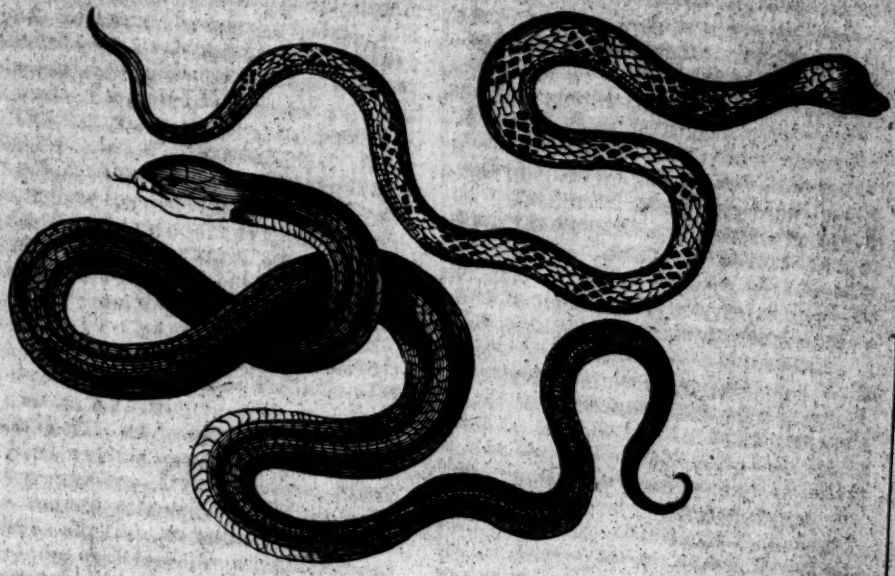


Fig. 2. CORNUS, the CORNEL-TREE.



Fig. 3 COPPELS.



Fig. 4. COTULA.



Fig. 5. CRENATED LEAVES.



J. Jeffery, sculp.

BRITISH MUSEUM

ceous; the vexillum cordated, bent backwards, and ſcarce longer than the alæ, ſtanding in cluſters at the top of the branch: the fruit is a very long, ſlender pod, contracted between each ſeed, and formed of two valves, with only one cell; the ſeeds are numerous, and of a round figure. See plate LIV. fig. 4.

CORPORA CAVERNOSA, in anatomy. See the article CAVERNOSE.

CORPORA OLIVARIA, two protuberances of the medulla oblongata. See the articles BRAIN and OLIVARIA CORPORA.

CORPORA PYRAMIDALIA, two protuberances of the under-part of the cerebellum, ſo called from their reſemblance of a pyramid. See CEREBELLUM.

CORPORA STRIATA, two protuberances in the lateral ventricles of the brain. See the article BRAIN.

CORPORAL, an inferior officer under a ſerjeant, in a company of foot, who has charge over one of the diviſions, places and relieves centinels, and keeps good order in the corps de garde: he alſo receives the word from the inferior rounds, which paſſes by his corps de garde. This officer carries a fuſee, and is commonly an old ſoldier: there are generally three corporals in each company.

CORPORAL *of a ſhip*, an officer who has the charge of ſetting and relieving the watches and centries, and who ſees that the ſoldiers and ſailors keep their arms neat and clean: he teaches them how to uſe their arms, and has a mate under him.

CORPORAL, *corporale*, in the chriſtian church, a name for the linen cloth thrown over the conſecrated elements at the celebration of the euchariſt. See the article EUCHARIST.

The inſtitution of it is aſcribed to Euſebius biſhop of Rome, about the year 300.

CORPORATE, or INCORPORATE, is ſaid of corporations. See the article CORPORATION.

CORPORATE COUNTY. See COUNTY.

CORPORATION, a body politic, or incorporate, ſo called becauſe the perſons or members are joined into one body, and are qualified to take and grant, &c.

Corporations are either ſpiritual or temporal: ſpiritual, as biſhops, deans, archdeacons, parſons, vicars, &c. Temporal, as mayor, commonalty, bailiff, burgeſſes, &c. And ſome corporations are of a mixed nature, compoſed of ſpiritual and temporal perſons, ſuch as heads of colleges and hoſpitals, &c. All corporations are ſaid to be eccleſiaſtical or lay: eccleſiaſtical are either regular, as abbies, priories, chapters, &c. or ſecular, as biſhoprics, deaneries, archdeaconries, &c. lay, as thoſe of cities, towns, companies, or communities of commerce, &c. See ABBEY, COMPANY, &c.

Corporations may be eſtabliſhed three different ways, *viz.* by preſcription, letters patent, or act of parliament; but are moſt commonly eſtabliſhed by patent or charter. London is a corporation by preſcription: but though corporations may be by preſcription, yet it ſhall be intended, that it did originally derive its authority by a grant from the king.

A corporation may be diſſolved; for it is created upon a truſt, and if it be broken, it is forfeited. No perſon ſhall bear office in any corporation but ſuch as have received the ſacrament, taken oaths, &c. and none are to execute in a corporation for more than a year. A corporation cannot ſue or appear in perſon, but by an attorney.

Ordinances made by corporations, to be obſerved on pain of impriſonment, forfeiture of goods, &c. are contrary to Magna Charta. Actions ariſing in any corporation, may be tried in the corporation courts: but if they try actions not within their juriſdictions, and encroach upon the common law, they are liable to be puniſhed for it. The corporation of the city of London is to anſwer for all particular miſdemeanors committed in any of the courts of juſtice within the city, and for all other general miſdemeanors committed in the city.

CORPOREAL, thoſe qualities which denominate a body. See QUALITY, BODY, and INCORPOREAL.

CORPORIFICATION, or CORPORATION, in chemiſtry, the operation of recovering ſpirits into the ſame body; or, at leaſt, into a body nearly the ſame with what they had before their ſpiritualization.

CORPS DE GARDE, a poſt in an army, ſometimes under covert, ſometimes in the open air, to receive a number of ſoldiers, who are relieved from time to time, and are to watch in their turns, for the ſecurity of ſome more conſiderable poſt.

Corps de garde is frequently uſed for the men who watch in this poſt.

CORPS DE BATAILLE, the main body of an army, drawn up in order of battle. See the articles ARMY and GUARD.

CORPS, in architecture, a term to ſignify any part that projects or advances beyond the naked of a wall, ſerving as a ground for ſome decoration, or the like.

CORPULENCY, in medicine, the ſtate of a perſon too much loaded with fleſh or fat.

An exceſſive degree of corpulency or fatneſs becomes a diſeaſe, when the whole body, as well as the belly, is grown into ſuch a bulk, that the actions, eſpecially with reſpect to motion and reſpiration, are greatly impaired if not entirely impeded. Boerhaave obſerves, that corpulency does not conſiſt in the ſolids of the body's being increaſed, but in their being diſtended to a greater pitch by the abundance of humours collected in them.

Corpulency ariſes from a laudable, copious, oily, ſoft blood, containing leſs than its ſhare of ſalt; and is promoted by any thing that tempers and ſoftens the blood, and renders it leſs ſharp and ſaline; ſuch are want of exerciſe and motion, an indolent life, too much ſleep, nouriſhing foods, &c.

There is not a better remedy to reduce a corpulent habit, than acetum ſcilliticum drunk upon an empty ſtomach. Semen fraxini, or bird's tongue, as it is called, ad ʒj. drank in a morning in a glaſs of wine, is very much commended as an effectual diuretic, and, on that account, abates corpulency. Borellus commends the chewing of tobacco; but it is not ſafe for all perſons to uſe it, leſt it ſhould throw them into a conſumption. Thoſe that are naturally groſs and fat oftener die ſuddenly than other people. The moſt extraordinary inſtance of corpulency perhaps ever known, was that of Edw. Bright of Malden, in Eſſex, who, dying in Nov. 1750, at the age of twenty-nine years, weighed ſix hundred and ſixteen pounds; his waiſtcoat, with great eaſe, was buttoned round ſeven men of ordinary ſize.

CORPUS, BODY, in phyſiology. See the article BODY.

CORPUS, in anatomy, a term applied to ſeveral parts of the animal ſtructure, as corpus calloſum, corpus cavernoſum, corpus highmori, corpus lacteum ovarii, corpus pampiniforme, &c.

CORPUS CALLOSUM, a medullary part of the brain, which covers the whole lateral ventricles. See the articles BRAIN and CALLOSUM CORPUS.

CORPUS CAVERNOSUM, a cavernous ſubſtance, ſurrounding the vagina, which ſwells in the time of coition. See VAGINA and CAVERNOSE.

CORPUS PAMPINIFORME, a body formed a little above the teſticles, by the diviſion and reunion of the ſpermatic veins. See the article SPERMATIC.

CORPUS RETICULARE. See RETICULAR BODY.

CORPUS is alſo uſed in matters of literature, for ſeveral works of the ſame nature, collected together in the form of a ſyſtem of any art or ſcience. See the article BODY.

CORPUS CUM CAUSA, in law, a writ iſſuing out of the chancery, to remove both the body and record, touching the cauſe of any man lying for execution, upon a judgment for debt, into the king's bench, there to lie till he has ſatisfied the judgment.

CORPUS CHRISTI, a feſtival of the church; kept on the next Thurſday after Trinity-ſunday, inſtituted in honour of the euchariſt; to which alſo one of the colleges in Oxford is dedicated.

CORPUSCLE, in phyſics, a minute particle, or phyſical atom, being ſuch as a natural body is made up of. By this word is not meant the elementary particles, nor the hypoſtatical principles of chemiſts; but ſuch particles, whether of a ſimple or compound nature, whoſe parts will not be diſſolved nor diſſipated by ordinary degrees of heat. Sir Iſaac Newton, in the ſecond book of his Optics, ſhews a way of gueſſing, with great accuracy, at the ſize of the component corpuſcles of bodies. See COLOUR.

CORPUSCULAR PHILOSOPHY, that way of philoſophiſing which endeavours to explain things, and to account for the phænomena of nature by the motion, figure, reſt, poſition, &c. of the corpuſcles, or the minute particles of matter. See the article ATOMICAL PHILOSOPHY.

This philoſophy is ſo very antient, that both before Epicurus and Democritus, and even before Leucippus taught in Greece, there was a phœnician philoſopher, who explained natural phænomena by the motions and affections of the minute corpuſcles of matter, as very old writers inform us: and, therefore, it ſhould rather be called phœnician philoſophy, than epicurean.

Mr. Boyle ſums up the chief principles of the corpuſcular hypotheſis, which now flouriſhes under the mechanical philoſophy, in theſe particulars:

1,

1. They ſuppoſe that there is but one catholic or univerſal matter, which is an extended, impenetrable, and diviſible ſubſtance, common to all bodies, and capable of all forms. 2. That this matter, in order to form the vaſt variety of natural bodies, muſt have motion in ſome or all its aſſignable parts; and that this motion was given to matter by God the creator of all things, and has all manner of directions and tendencies. 3. Matter muſt alſo be actually divided into parts, and each of theſe primitive particles, fragments, or atoms of matter, muſt have its proper magnitude or ſize, as alſo its peculiar figure or ſhape. 4. They ſuppoſe alſo, that theſe differently ſized and ſhaped particles may have as different orders and poſitions, whereof great variety may ariſe in the compoſition of bodies. See the article EPICUREAN PHILOSOPHY.

CORRECTION, in printing, the pointing out or diſcovering the faults in a printed ſheet, in order to be amended by the compoſitor, before it be printed off. See the article PRINTING.

The corrections are placed on the margin of every page, right againſt the line wherein the faults are found: and there are different characters uſed to expreſs different corrections: thus, ꝺ is put for *dele*, to intimate that ſomething, as a point, letter, word, *&c.* daſhed in that line, is to be taken out. If any thing is to be inſerted, the place is to be marked thus ʌ and the thing to be inſerted, added in the margin. When there are two or more corrections in the ſame line, then they are all ſeparated in the margin by little bars, thus |. If a ſpace be omitted, its place is marked with a caret, and the margin thus #. When a letter is inverted, it is expreſſed in the margin thus ↄ. When any thing is to be tranſpoſed, it is directed thus, *Extraordinary ſcarce ever fail of* ⎧ *attainments* ⎫ *exciting envy*, for *Extraordinary attainments ſcarce ever fail of exciting envy*, and in the margin is added *tr.* If italic characters are to be changed for roman, or *vice verſa*, a line is drawn thus — under the letters, and *rom.* or *ital.* is writen in the margin. If a ſpace, or an m or n quadrat, ſtick up, and print black, it is marked in the margin with a daſh, thus |. If a word, ſentence, or paragraph is entirely omitted, the place is marked with a caret, and in the margin is put the word *out*. If the letters of a word ſtand too far aſunder, a line is drawn under them, and in the margin is put a crooked line or hook, thus ⌣. There are many other marks uſed in correcting, as ✓ for ſuperior, *cap.* for capital, *l. c.* for lower-caſe, *&c.*

CORRECTION, in the manege, denotes aids given with ſeverity. See the articles AID and CHASTISEMENT.

CORRECTION, in pharmacy, the adding ſome ingredient to a compoſition, in order to check or moderate the violence of operation: thus, for inſtance, ſome carminatives, ſuch as the ſeed of fennel, or aniſe, are added to ſena-leaves, which when exhibited alone, generally produce flatulencies and gripes. See CORRECTOR.

CORRECTION, in rhetoric, the ſame with epanorthoſis. See EPANORTHOSIS.

CORRECTOR, in general, denotes ſomething that mends the faults or bad qualities of others.

CORRECTOR *of the ſtaple*, a clerk belonging to the ſtaple, whoſe buſineſs is to write down and record the bargains that merchants make there.

CORRECTOR, in medicine and pharmacy, an ingredient in a compoſition, which guards againſt or abates the force of another.

Thus the lixivial ſalts prevent the grievous vellications of reſinous purges, by dividing their particles, and preventing their adheſions to the internal membranes, whereby ſometimes they occaſion intolerable gripings: and thus ſpices and carminative ſeeds alſo aſſiſt in the eaſier operation of ſome cathartics, by diſſipating collections of wind. In the making a medicine, ſuch a thing is alſo called a corrector, as deſtroys or diminiſhes a quality in it, that could not otherwiſe be diſpenſed with: thus turpentine may be called the corrector of quickſilver, by deſtroying its fluxity, and making it thereby capable of mixture; and thus rectified ſpirit of wine breaks off the points of ſome acids, ſo as to make them become ſafe and good remedies which before were deſtructive.

CORRELATIVE, ſomething oppoſed to another in a certain relation. Thus, father and ſon are correlatives. Light and darkneſs, motion and reſt, are correlative and oppoſite terms.

CORRIDOR, or CORIDOR. See the article CORIDOR.

CORRIGIOLA, in botany, a genus of the pentandria-trigynia claſs of plants, the corolla whereof conſiſts of five, oval,

patent petals, ſcarce bigger than the cup; there is no pericarpium but the calyx, which cloſing, ſerves in the place of one; the ſeed is ſingle and ovato-triquetrous.

CORROBORANTS, or CORROBORATIVE MEDICINES, the ſame with ſtrengtheners. See the article STRENGTHENERS.

CORROSION, in a general ſenſe, the action of gnawing away, by degrees, the continuity of the parts of bodies.

Acids corrode moſt natural bodies.

CORROSION, in chemiſtry, an action on bodies, by means of proper menſtruums, that produces new combinations, and a change of their form, without converting them to fluidity. See the article MENSTRUUM.

The ſubject of this operation, as it is uſed in pharmacy, is principally metals; and the manner in which it is performed is commonly of two kinds: the firſt and moſt ſimple is, when the body to be corroded is put into a fluid menſtruum, and either taken out inſtantly, and put into a moiſt place, as in the method generally practiſed in making a ceruſs; or continued therein till the whole of the matter be corroded, as in the preparation of turbith mineral from the oil of vitriol and mercury. This may properly be called corroſion by immerſion. The other, called in domeſtic chemiſtry, cementation, is performed by expoſing the body to be corroded, to the action of a vapour or ſteam, expelled by heat, from what is uſed as the menſtruum, as in the proceſs given by the Edinburgh Diſpenſatory for the making ceruſs.

There are, nevertheleſs, other methods by which corroſions are, in moſt inſtances, made; as in the rubigo chalybis of the London Diſpenſatory, where ſprinkling or rubbing of the body over with a menſtruum are ordered in the place of dipping, which the form of ſteel-filings made inconvenient: and ſome others, which from the particular texture of the matter become neceſſary; thus in the corroſion of mercury by ſulphur, in the preparation of æthiops mineral, trituration, or ſometimes fuſion, is employed: and in the chalybis cum ſulphure prep. the heated ſteel is only touched with the ſulphur.

CORRUGATOR, in anatomy, a muſcle which ariſes fleſhy from the proceſs of the os frontis, next the inner or great angle of the orbit, above the joining of the os naſi and the ſuperior proceſs of the os maxillare with this bone; from thence it runs obliquely outwards and upwards, and is inſerted into the fleſhy part of the occipito-frontalis, ſome of its fibrillæ paſſing through into the ſkin, a little higher than the middle region of the eye-brows. Its uſe is to ſmooth the ſkin of the forehead, by pulling it down after the action of the occipito-frontalis; and when it acts moſt forcibly, it ſerves to wrinkle the ſkin of the front between the ſupercilia, as it happens when we frown, or knit the brows.

CORROSIVES, in ſurgery, are medicines which corrode whatever part of the body they are applied to: ſuch are burnt alum, white precipitate of mercury, white vitriol, red precipitate of mercury, butter of antimony, lapis infernalis, &c.

CORRUPTICOLÆ, in church-hiſtory, a ſect of heretics, ſo called from their maintaining that the body of Chriſt was corruptible, that the fathers had owned it, and that to deny it was to deny the truth of our Saviour's paſſion.

CORRUPTION, the deſtruction, extinction, or, at leaſt, ceſſation for a time, of the proper mode of exiſtence of any natural body. See PUTREFACTION.

Whenever any body loſes all or any of thoſe accidents, which are eſſentially neceſſary to the conſtituting of ſuch a particular kind, it is then ſaid to be corrupted, or deſtroyed, and loſes its former denomination: but nothing can be deſtroyed of its ſubſtance, or materiality; for as in generation, nothing of matter is produced that did not before exiſt, ſo in corruption, nothing more is loſt beſides that particular modification which was its form, and conſtituted it of ſuch a ſpecies. Dr. Drake accounts for the corruption of animal and vegetable bodies thus: the principle of corruption is, perhaps, the ſame which in a ſtate of circulation, is the principle of life, *viz.* the air, which is found mixed in conſiderable quantities with all ſorts of fluids, as neceſſary to vegetable as to animal life. Now this air has two motions, *viz.* an expanſive one, from its natural elaſticity, by means whereof it communicates that inteſtine motion which all juices have, and by which the containing parts are gradually extended, and grow; and a circulary or progreſſive motion, which is not eſſential to it, but is occaſioned by the reſiſtance of the ſolid parts of thoſe bodies, which obliges it to take that courſe that is moſt free and open, which is through the veſſels of animals and plants. Now this

courſe being ſtopt, the expanſive motion ſtill remains, and continues to act till, by degrees, it has ſo far overcome the including bodies, as to bring itſelf to an equal degree of expanſion with the external air, which it cannot do without deſtroying the texture and continuity, or ſpecific degree of coheſion, of thoſe ſolids, which is what we call a ſtate of corruption.

The expulſive or deſtructive quality of the air in bodies may be promoted two ways, and therefore corruption accelerated by as many ways, *viz.* either by weakening the tone or coheſion of the including parts, and ſo facilitating the work of the air, as is the caſe when fruit is bruiſed, which is found to corrupt ſooner than in any other part: or by extending the expanſive force of the air itſelf by heat, or ſome other co-operating circumſtance, and ſo helping it to overcome the reſiſtance the ſooner.

CORRUPTION *of blood*, in law, an infection accruing to a man's ſtate, attainted of felony and treaſon, and to his iſſue; for as he loſes all to the prince, *&c.* his iſſue cannot be heirs to him, or to any other anceſtor by him: and if he were noble, his heirs are rendered ignoble.

CORSAIR, a pirate, or perſon who ſcours the ſea for plunder, with an armed veſſel, without commiſſion from any prince or power. A corſair differs from a privateer, in that the latter acts under a commiſſion, and only attacks the veſſels of thoſe at war with the ſtate whence he had his commiſſion.

CORSELET, a little cuiraſs; or, according to others, an armour or coat made to cover the whole body, antiently worn by the pike-men, uſually placed in the front and flanks of the battle, for the better reſiſting the enemy's aſſaults, and guarding the ſoldiers placed behind them.

CORSICA, an iſland in the Mediterranean, between 8° and 10° eaſt long. and between 41° and 43° north latitude, about one hundred miles ſouth of Genoa, and ſubject to that republic; though the natives have for many years diſputed their right, and are ſtill in arms againſt them.

CORSNED BREAD, a certain ſuperſtitious trial made uſe of among our ſaxon anceſtors, by taking a piece of bread, and eating it, with ſolemn oaths and execrations, that it might prove poiſon, or their laſt morſel, if what they aſſerted or denied was not true.

The bread was firſt accurſed by the prieſt, and then offered the ſuſpected criminal, to be ſwallowed by way of purgation, it being believed that it would choak him, if he was not innocent.

CORTEX, BARK, in phytology and dendranatomy. See the article BARK.

CORTEX, or CORTEX PERUVIANUS, is more particularly uſed for the quinquina, or jeſuits-bark. See QUINQUINA.

CORTEX WINTERANUS, in botany, *&c.* See the article WINTER'S BARK.

CORTEX CEREBRI, the cortical part of the brain, ſo called on account of its greyiſh colour. See the article BRAIN.

CORTICAL, in general, ſomething conſiſting of, or reſembling bark. Hence the

CORTICAL *part of the brain*, is the exterior part, ſo called on account of its inveſting the internal or medullary part, as the bark of a tree does the woody part. See the article BRAIN.

CORTONA, a city of Tuſcany, in Italy, about thirty-five miles ſouth-eaſt of Sienna: eaſt longitude 13°, and north latitude 43° 15'.

CORTUSA, in botany, a genus of the pentandria monogynia claſs of plants, the flower of which conſiſts of one rotated petal; the fruit is an ovato-oblong acuminated capſule, furrowed longitudinally on each ſide, with two valves having their ſides involuted, and one cell containing numerous oblong, obtuſe, ſmall ſeeds. The leaves, ſays Dale, promote expectoration.

CORVET, or CURVET, in the manege. See the article CURVET.

CORUNNA, or GROYNE, a port-town of Gallicia, in Spain, ſituated on a fine bay of the Atlantic ocean, about thirty-two miles north of Compoſtella: weſt longit. 9°, and north lat. 43°.

It is to this port that the engliſh pacquet-boat always goes, in time of peace.

CORUSCATION, a glittering, or gleam of light iſſuing from any thing. It is chiefly uſed for a flaſh of lightening darting from the clouds in time of thunder. See LIGHTENING and THUNDER.

There is a method of producing artificial coruſcations, or ſparkling fiery meteors, which will be viſible not only in the dark, but at noon day, and that from two liquors actually cold; the method is this: fifteen grains of the ſolid phoſphorus are to be melted in about a dram of water; when this is cold pour upon it two ounces of oil of vitriol; let theſe be ſhaken together, and they will at firſt heat, and afterwards they will throw up fiery balls in great number, which will adhere

adhere like ſo many ſtars to the ſides of the glaſs, and continue burning a conſiderable time; after this, if a ſmall quantity of oil of turpentine be poured in, without ſhaking the vial, the mixture will of itſelf take fire, and burn very furiouſly. The veſſel ſhould be large, and open at the top. See INFLAMMABILITY.

Artificial coruſcations may alſo be produced by means of oil of vitriol and iron, in the following manner. Take a glaſs body, capable of holding three quarts; put into this three ounces of oil of vitriol, and twelve ounces of common water; then warming the mixture a little, throw in, at ſeveral times, two ounces or more of clean iron filings; upon this an ebullition, and white vapours will ariſe: then preſent a lighted candle to the mouth of the veſſel, and the vapour will take fire, and afford a bright fulmination, or flaſh like lightening. Applying the candle in this manner ſeveral times, the effect will always be the ſame; and ſometimes the fire will fill the whole body of the glaſs, and even circulate to the bottom of the liquor, and at others it will only reach a little way down its neck. The great caution to be uſed in this experiment is the making the matter of a proper heat; for, if too cold, few vapours will ariſe, and if made too hot, they will aſcend too faſt, and will only take fire in the neck of the glaſs, without any remarkable coruſcation.

CORVUS, the RAVEN or CROW-kind, in ornithology, a genus of birds, of the order of the picæ, the diſtinguiſhing characteriſtic of which is, that the beak is of a convex and cultrated figure, the chaps nearly equal, and the baſe beſet with hairs. To this genus belong the raven, the crow, rook, jackdaw, &c. See the article RAVEN, CROW, ROOK, &c.

CORVUS, the RAVEN, in aſtronomy, a conſtellation of the ſouthern hemiſphere, wherein, according to Ptolemy and Tycho's catalogue, are ſeven ſtars; whereas the Britannic catalogue reckons no leſs than ten.

CORVUS, in antiquity, a machine invented by the Romans at the time of their wars in Sicily, when they firſt engaged the carthaginian fleet. According to Polybius, the corvus was framed after this manner:

On the prow of their ſhips they erected a round piece of timber about 1¼ foot diameter, and twelve feet in length, on the top of which was a block, or pulley; round this piece of timber was a platform of boards four feet in length, which was about eighteen feet long, and well framed and faſtened with iron; the entrance was longways, and it was moveable round the aforeſaid upright piece of timber, and could alſo be hoiſted up and down within ſix feet of the top: about this frame was a ſort of parapet knee high, which was defended with upright bars of iron, ſharp at the ends, and towards the top there was a ring, by the help of which, and a pulley, or tackle, it was hoiſted and lowered at pleaſure; with this moveable gallery, they boarded the enemies ſhips (when they did not lie ſide by ſide) ſometimes on their bow, and ſometimes in the after part of the ſhip; the ſoldiers keeping the boſs of their bucklers level with the top of the parapet, &c. and by the means of this new engine got a victory over the Carthaginians in their firſt ſea-fight with them, though the enemy were long before well ſkilled in naval affairs, and the Romans raw and ignorant.

CORYBANTES, in antiquity, prieſts of the goddeſs Cybele, who, inſpired with a ſacred fury, danced up and down, toſſing their heads and beating on cymbals or brazen drums. They inhabited mount Ida, in the iſland of Crete, where they nouriſhed the infant Jupiter, keeping a continual rattling with their cymbals, that his father Saturn, who had reſolved to devour all his male offspring, might not hear the child's cries.

CORYBANTICA, in grecian antiquity, a feſtival kept in honour of the corybantes.

CORYCOMACHIA, among the antients, was a ſort of exerciſe in which they puſhed forwards a ball, ſuſpended from the ceiling, and at its return either caught it with their hands, or ſuffered it to meet their body. Oribaſius informs us it was recommended for extenuating too groſs bodies.

CORYLUS, the HAZLE, in botany, a genus of the monoecia-polyandria claſs of plants, the male flowers of which are diſpoſed in form of a long amentum; the female ones are remote from the males, on the ſame plant, ſeſſile, and included in a gem; there is no corolla nor pericarpium; the fruit is a ſubovated nut, with a deraded baſe, and top a little compreſſed and a little acuminated. See plate LIV. fig. 7.

The kernels of filberds and ſpaniſh nuts, though

Fig. 1. COMPONED.



Fig. 2. COUCHANT.



Fig. 3. CONYZA.

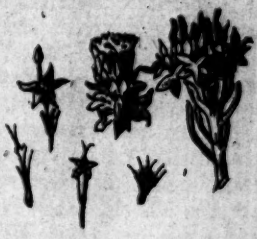


Fig. 4. CORONILLA.



Fig. 5. COTINUS.

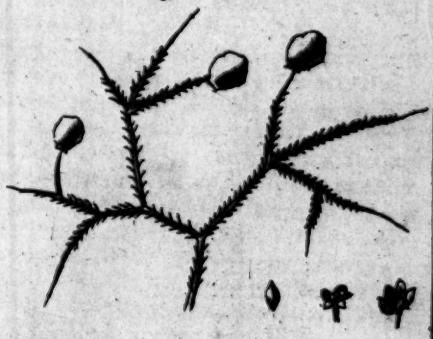


Fig. 6. COTYLEDON.



Fig. 7. CORYLUS.

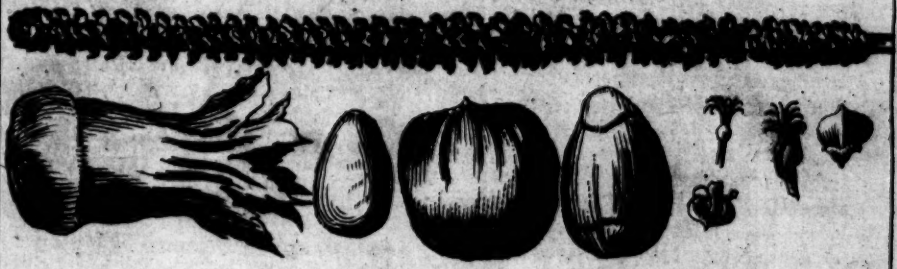


Fig. 8. CROCUS.



Fig. 9. CUCUMBER.



T. Jefferys sculp.

BRITISH MUSEUM

though commonly eaten, are difficult of digeſtion, and conſequently bad for the ſtomach, and the cauſe of head-achs.

CORYMBIFEROUS PLANTS are ſuch as have a compound diſcous flower, but their ſeeds have no down adhering to them. They bear their flowers in cluſters, and ſpreading round in the form of an umbrella. Of this kind are the corn-marygold, common ox-eye, the daiſey, camomile, mug-wort, feverfew, &c.

CORYMBIUM, in botany, a genus of plants belonging to the ſyngeneſia-monogamia claſs, the flower of which is monopetalous and equal; the limb being divided into five lanceolated ſegments; there is no pericarpium; the immutated cup contains one oblong ſeed, covered with a wool-like down.

CORYMBUS, κόρυμβος, among botaniſts, cluſters of berries, as thoſe of ivy. See the article CORYMBIFEROUS.

Jungius uſes it to ſignify the extremity of a ſtalk, ſo ſubdivided and loaded with flowers, or fruits, as to compoſe a ſpherical figure. It is alſo, by modern botaniſts, uſed to ſignify a compound diſcous flower, which does not fly away in down, the chryſanthemum, daiſey, chryſocome, &c. for this kind of flowers, being ſpread into breadth, reſemble an umbrella, or bunch of ivy-berries.

CORYPHA, in botany, a genus of plants, the characters of which are not perfectly aſcertained: the general ſpatha is compound; the ſpadix ramoſe; and the corolla is divided into three oval, obtuſe, patent ſegments; the ſtamina are ſix ſubulated filaments, longer than the corolla; the antheræ are adnate; the germen is roundiſh; the ſtyle is ſubulated and ſhort; the ſtigma is ſimple; the fruit is a large, globoſe, unilocular berry; the ſeed is ſingle, oſſeous, large and globoſe.

CORYPHÆNA, in ichthyology, a genus of malacopterygious fiſhes, which have five officles, or little bones, in the branchioſtege membrane, and their back-fin reaches from the head to the tail.

To this genus belong the hippurus, novacula, and pompilus. See the article HIPPURUS, &c.

CORYPHE, among phyſicians, the crown of the head; alſo the interior extremity of the fingers, next the nails.

CORYZA, in medicine, a catarrhal affection, conſiſting in the excretion of a ſerous and viſcous humour, by the noſe and fauces. Some alſo underſtand the ſame thing by the word gravedo, making this and the coryza ſynonymous terms, but improperly; for the gravedo is, ſtrictly ſpeaking, a catarrhal affection, in which there is no actual excretion of a ſerous matter, but only a congeſtion of it with ſtagnation; whence it is eaſy to conceive, that the ſymptoms attending the gravedo, when the matter is confined, are worſe than thoſe in the coryza, in which it is evacuated. See CATARRH.

This diſeaſe is generally preceded by an itching, and by ſneezing; ſometimes by what is called a gravedo, a congeſtion of matter without excretion; this is followed by the excretion of a ſerous and viſcous matter by the noſtrils and mouth, and ſometimes by the eyes; the more thin and acrid this matter is, the more ſeverely it affects the part through which it is evacuated, ſo that ſometimes it is attended with a ſenſation of pain, and ſoreneſs in them.

Theſe diſeaſes are very frequent; and among children, they uſually take their riſe in them from obſtructions of perſpiration, or from ſuppreſſions of urine. Young people, as they grow farther up, are ſubject to them from an abundant quantity of the ſalival matter: and in more advanced years, thoſe people fall into them, in whom nature is not able to relieve herſelf, by a hæmorrhage: and people of phlegmatic habits, and ſleepy diſpoſitions, are moſt ſubject to them.

The general cauſes of theſe defluxions, are the ſame with thoſe of hæmorrhages by the noſe, that is, a congeſtion of blood in the head, by means of a diſcharge of which, nature meant to relieve herſelf of a plethora: but in theſe caſes, the blood being very abundant in ſeroſities, theſe being the thinner part, are moſt eaſily thrown out, and ſo paſs off alone, leaving the red part behind. Sometimes alſo theſe diſeaſes are produced by a mere retention of the ſerous and lymphatic juices in and about the glands of theſe parts; but this is much more rarely the caſe. The occaſional or accidental cauſes which bring on theſe congeſtions and ſtagnations, are, the ſuppreſſion of other evacuations, ſuch as habitual and natural diarrhœas, or the evacuations by purging medicines, which perſons had long accuſtomed themſelves to at the ſpring and autumn ſeaſons: the cold and moiſt temperature of the air, or a ſudden chilling of the body in a hot and moiſt place: the leaving off a copious uſe of tobacco, and the abuſe of ſnuff, or other ſtrenutatory powders. To

this

this is to be added, every thing that impedes natural perſpiration, and ſometimes ſuppreſſions of urine.

The ſimple coryza and gravedo are attended with no great danger, not even when they are of long ſtanding, provided that the conſtitution be ſtrong and healthy in other reſpects. But this is not the caſe in old and weak people; for in theſe, this continual defluxion upon the head too often brings on vertiginous complaints, and ſometimes paralytic, and even apoplectic diſorders, or elſe aſthmas, and ſuffocative catarrhs, are the conſequence: and if this matter, ſo copiouſly ſecreted from the blood, be thrown upon the lungs, it may occaſion exulcerations, and even a true phthiſis.

This is a diſeaſe which few people trouble a phyſician about, being uſually left to nature; but it is, however, in the power of medicine to do great ſervice, and, uſually, wholly to remove the complaint; which, even where it is not attended with danger, is ſo far troubleſome, as that any one would wiſh to be rid of it.

In caſes of a gravedo, a juſt and neceſſary excretion of the congeſted matter muſt be provided for; and this may eaſily be contrived to be made, by leſs troubleſome evacuations than thoſe to which nature ſeems to point, and by more convenient outlets; and by continuing this method, the future diſtempers of this kind may be anticipated and prevented. For the ready diſcharge of the matter, according to the intent of nature, errhines are to be uſed; the powders of the cephalic herbs, as thyme, betony, lavender, and the like, may be ſnuffed up the noſe, and the volatile pungent ſalts may be ſnuffed too: after this, it will be proper to give a gentle purge; and when the cure is perfected, the return may be prevented by bleeding and purging in autumn. When the defluxion is very violent, the uſe of gentle diaphoretics is recommended, and a powder compoſed of cinnabar, and a gentle opiate. In caſes where the matter of a coryza is very acrid, and there is a violent pain in the head, the external uſe of camphor is of great ſervice; it is in this caſe to be applied to the temples, and the patient ſhould at the ſame time take internally powders compoſed of nitre, and the common abſorbents, and diaphoretic antimony, and afterwards ſhould take ſome gentle purges, and frequently bathe the feet in warm water.

CORZOLA, or CURSCOLA, an iſland in the gulph of Venice, divided from Raguſa, in Dalmatia, by a narrow ſtrait; eaſt long. 18°, and north lat. 42° 35′.

COS, the WHET-STONE, in natural hiſtory, a genus of vitreſcent ſtones, conſiſting of fragments of an indeterminate figure, ſub-opake and granulated.

Of this genus there are ſeveral ſpecies, ſome conſiſting of rougher and others of ſmoother, or even of altogether impalpable particles; and uſed not only for whet-ſtones, but alſo for miſl-ſtones and other the like purpoſes.

COS or KOS. See the article KOS.

COSCINOMANCY, κοσκινομαντία, among the antients, the art of divination by means of a ſieve. It was generally practiſed to diſcover thieves, or others ſuſpected of any crime, in this manner: they tied a thread to the ſieve, by which it was ſuſpended; or elſe placed it on the point of a pair of ſheers, which they held up by two fingers; then prayed the gods to direct and aſſiſt them: after that they repeated the names of the perſons under ſuſpicion, and he, at whoſe name the ſieve whirled round, or moved, was thought to have committed the fact.

This practice muſt have been very antient, being mentioned by Theocritus, in his third Idyllion.

CO-SECANT, in geometry, the ſecant of an arch which is the complement of another to 90°. See the articles SECANT and COMPLEMENT.

COSENAGE, or COGNATION, in law, a writ that lies where the great-grandfather is ſeized in his demeſne, as of fee, at the day of his death, of certain lands and tenements, and dying, a ſtranger enters and abates: then ſhall the heir have this writ of coſenage.

COSENZA, the capital of the higher Calabria, in the kingdom of Naples: eaſt long. 16° 35′, and north lat. 39° 15′.

It is an archbiſhop's ſee.

COSHERING, or COCHERING, in the feudal law, a grievous exaction impoſed by a ſort of prerogative, or ſignoral authority of the lords upon their tenants, in lying and feaſting, with all their retinue, for ſometime at their houſes.

CO-SINE, in trigonometry, the ſine of an arch, which is the complement of another to 90°. See the article SINE.

COSMETIC, in phyſic, any medicine or preparation which renders the ſkin ſoft and white, or helps to beautify and improve the complexion, as lip ſalves, cold creams, ceruſs, &c.

It

It is ſaid that the Indians improve their complexions wonderfully by waſhing with the water of green cacao-nuts.

COSMICAL, a term in aſtronomy, expreſſing one of the poetical riſings of a ſtar: thus, a ſtar is ſaid to riſe coſmically, when it riſes with the ſun, or with that point of the ecliptic in which the ſun is at that time: and the coſmical ſetting is when a ſtar ſets in the weſt at the ſame time that the ſun riſes in the eaſt.

COSMICAL ASPECT, among aſtrologers, the aſpect of a planet, with reſpect to the earth. See the article ASPECT.

COSMICAL QUALITIES are, by Mr. Boyle, uſed in the ſame ſenſe with ſyſtematical ones, or thoſe reſulting from the ſyſtem of the univerſe.

COSMOGRAPHY, κοσμογραφια, a deſcription of the ſeveral parts of the viſible world, or the art of delineating the ſeveral bodies according to their magnitudes, motions, relations, &c.

Coſmography conſiſts of two parts, aſtronomy and geography. See the articles ASTRONOMY and GEOGRAPHY.

COSMOLABE, the name of an antient mathematical inſtrument, reſembling the aſtrolabe, and ſerving to meaſure diſtances both in the heavens and on the earth. See the article ASTROLABE.

COSMOPOLITE, a term denoting a citizen of the world, or one who has no fixed reſidence any where.

COSSACKS, people inhabiting the banks of the rivers Nieper and Don, near the Black ſea and frontiers of Turky. Their country is commonly called the Ukraine, and is moſtly ſubject to Ruſſia.

COSSET, among farmers, a colt, calf, lamb, &c. brought up by hand, without the dam.

COSTÆ, RIBS, in anatomy. See RIBS.

COSTAL, an appellation given by anatomiſts to ſeveral parts belonging to the ſides: thus we meet with coſtal muſcles, vertebræ, &c.

COSTA RICA, a province of Mexico, bounded by the North ſea on the north-eaſt, and by the Pacific ocean on the ſouth-weſt. Its chief town is New-Carthage.

COSTARUM DEPRESSORES, in anatomy, that part of the intercoſtal muſcles which lies next the ribs. See the article INTERCOSTAL.

COSTARUM LEVATORES, the ſame with the ſupracoſtales. See SUPRACOSTALES.

COSTIVENESS, *obſtructio alvi*, in medicine, a preternatural detention of the feces, with an unuſual drineſs and hardneſs thereof, and thence a ſuppreſſion of their evacuation. See COLIC.

If coſtiveneſs proceeds from dry hard excrements, a moiſtening ſlippery diet of plums, cherries, or ſcalded apples, with or without raiſins, ſhould be taken; coffee ſhould be alſo drank with milk; but the moſt effectual means to remove theſe obſtructions, to raiſe the ſpirits, and the languid fibres of the inteſtines, are gentle purges, ſuch as purging mineral waters, purging ſalts, ſal mirabile Glauberi, warm water, and the common purging potion, as well as the lenitive electuary, and emollient clyſters.

Hoffman ſays an obſtinate coſtiveneſs is owing generally to ſpaſms in the inteſtines themſelves, or in the lower part of the colon and rectum; or, as propagated by conſent from the more remote parts. The ſuppreſſion of this evacuation produces ſcybale, generates flatulencies and other grievous ſymptoms, eſpecially in hypochondriac and hyſteric perſons: but when this diſeaſe is conſtitutional, it may be borne a long time without danger.

For coſtiveneſs in children, Boerhaave recommends abſorbents, and orders ſeven grains of the teſtaceous powders, three times a day. The nurſe muſt forbear feeding upon any thing that is ſour or acid. Harris believes an acid to be ſo predominant in infants as to cauſe all their diſeaſes.

COSTMARY, the engliſh name of a ſpecies of tanzy. See TANACETUM.

COSTS, in law, ſignifies the expences of a ſuit recovered by the plaintiff, together with damages.

COSTUME, a term among painters: thus, a painter muſt obſerve the coſtume: that is, he muſt make every perſon and thing ſuſtain its proper character, and not only obſerve the ſtory, but the circumſtances, the ſcene of action, the country or place, and make the habits, arms, manners, proportions, and the like, to correſpond.

COSTUS, in botany, a genus of the monandria-monogynia claſs of plants, the flower of which conſiſts of three lanceolated, concave, equal petals, placed pretty erect; the fruit is a roundiſh, coronated, trivalvular capſule with three cells, containing ſeveral triangular ſeeds.

The root of this plant, or the coſtus arabicus in pharmacy, is an attenuant, a diuretic,

diuretic, and a ſudorific: it is given in obſtructions of the menſes, and in chronic caſes, in which there are infarctions of the viſcera: its doſe is from ten grains to half a dram, but we ſeldom hear of its being given ſingly. It is uſed in the venice treacle, mithridate, and caryocoſtine electuary. Coſtus muſt be choſen recent, denſe, odorous, bitteriſh, and not carious.

It pays on importation a duty of $3\frac{87\frac{1}{2}}{100}$d. per pound, and there is a drawback on exportation of $3\frac{40}{100}$d.

CO-TANGENT, the tangent of an arch, which is the complement of another to 90°. See the article TANGENT.

COTICE, or COTISE, in heraldry, is the fourth part of the bend, and with us ſeldom if ever borne but in couples, with a bend between them. See BEND.

The bend thus bordered, is ſaid to be coticed; as, he bears ſable, on a bend coticed argent, three cinquefoils. See plate LXII. fig. 1.

COTINUS, SUMACH, in botany, the name of Tournefort for a genus of the pentandria trigynia claſs of plants, the flower of which conſiſts of five ovated petals, ſcarce larger than the cup; the fruit is an oval berry, with one cell containing a ſingle triangular ſeed. See plate LIV. fig. 5. The whole plant is thought to be extremely drying and aſtringent: the wood is uſed in the ſouthern parts of France to dye woollen cloth yellow; and the leaves are uſed by the tanners for preparing their leather. See the article SUMACH. Linnæus calls this plant Rhus.

COTRONA, a town of the further Calabria, in the kingdom of Naples, ſituated on the Mediterranean, about fifteen miles ſouth-eaſt of St. Severino: eaſt long. 17° 40′, and north latitude 38° 50′.

It is the ſee of a biſhop.

COTTAGE, a little houſe without lands belonging to it.

COTTON, in commerce, a ſoft downy matter found on the goſſypium of botaniſts. See the article GOSSYPIUM.

Cotton is ſeparated from the ſeeds of the plant by a mill, and then ſpun and prepared for all ſorts of fine works, as ſtockings, waiſtcoats, quilts, tapeſtry, curtains, &c. With it they likewiſe make muſlin, and ſometimes it is mixed with wool, ſometimes with ſilk, and even with gold itſelf.

The fineſt ſort comes from Bengal and the coaſt of Cormandel.

Cotton makes a very conſiderable article in commerce, and is diſtinguiſhed into cotton-wool and cotton-thread. The firſt is brought moſtly from Cyprus, St. John d'Acre, and Smyrna: the moſt eſteemed is white, long and ſoft. Thoſe who buy it in bales ſhould ſee that it has not been wet, moiſture being very prejudicial to it. The price of the fineſt is uſually from ſix to ſeven piaſters the quintal of forty-four ocos.

Of cotton-thread, that of Damas, called cotton d'once, and that of Jeruſalem, called bazas, are the moſt eſteemed; as alſo that of the Antilles iſlands. It is to be choſen white, fine, very dry, and evenly ſpun. The other cotton threads are the half bazas, the rames, the beledin, and gondezel; the payas and montaſiri, the geneguins, the baquins, the joſſelaſſars, of which there are two ſorts. Thoſe of India, known by the name of Tutucorin, Java, Bengal, and Surat, are of four or five ſorts, diſtinguiſhed by the letters, A, B, C, &c. They are ſold in bags, with a deduction of one pound and a half on each of thoſe of Tutucorin, which are the deareſt, and two pounds on each bag of the other ſorts. For thoſe of Fielebas, Smyrna, Aleppo, and Jeruſalem, the deduction at Amſterdam is eight in the hundred for the tare, and two in the hundred for weight, and on the value one *per cent.* for prompt payment.

Cotton of Siam, is a kind of ſilky cotton in the Antilles, ſo called becauſe the grain was brought from Siam. It is of an extraordinary fineneſs, even ſurpaſſing ſilk in ſoftneſs. They make hoſe of it there preferable to ſilk ones, for their luſtre and beauty. They ſell from ten to twelve and fifteen crowns a pair, but there are very few made, unleſs for curioſity.

The manner of packing COTTON, *as practiſed in the Antilles.* The bags are made of coarſe cloth, of which they take three ells and a half each: the breadth is one ell three inches. When the bag has been well ſoaked in water, they hang it up, extending the mouth of it to croſs pieces of timber nailed to poſts fixed in the ground ſeven or eight feet high. He who packs it goes into the bag, which is ſix feet nine inches deep, or thereabouts, and preſſes down the cotton, which another hands him, with hands and feet; obſerving to tread it equally every where, and putting

putting in but little at a time. The beſt time of packing is in rainy moiſt weather, provided the cotton be under cover. The bag ſhould contain from 300 to 320 pounds. The tare abated in the Antilles is three in the hundred. Cotton being a production applicable to a great variety of manufactures, it cannot be too much cultivated in our own plantations that will admit of it.

Cotton-wool, not of the britiſh plantations, pays on importation $\frac{77}{100}$d. the pound, and draws back on exportation $\frac{67\frac{1}{2}}{100}$d. Cotton yarn the pound, not of the Eaſt Indies, pays $2\frac{87\frac{1}{2}}{100}$ d. and draws back $2\frac{58\frac{1}{2}}{100}$d. Cotton yarn the pound, of the Eaſt Indies, pays $4\frac{56}{100}$d. and draws back $4\frac{27}{100}$ d.

Lavender COTTON, a name by which ſome call the ſantolina of authors. See the article SANTOLINA.

Philoſophic COTTON, a name given to the flowers of zinc, on account of their white colour, and reſemblance to cotton.

Silk-COTTON, in botany, the ſame with the xylon of authors. See XYLON.

COTTON-WEED, a name ſometimes given to the gnaphalium, or cudweed, of the generality of authors. See the article GNAPHALIUM.

COTTUS, in ichthyology, a genus of acanthopterygious fiſhes, diſtinguiſhed by having ſix oſſicles, or little bones, in the branchioſtege membrane: add to this, that the head is prickly, and broader than the body of the fiſh.

To this genus belong the cottus, called *gobio fluviatilis*, in engliſh the miller's thumb, the quadricornis, ſcorpæna, cataphractus, and dracunculus.

COTULA, in botany, a genus of the ſyngeneſia-polygamia-ſuperflua claſs of plants, the compound flower of which is a little convex, and radiated: the hermaphrodite partial flowers ſtand on the diſk, and are very numerous and tubuloſe, with the limb divided into four or five ſegments: the ſtamina are four very ſmall filaments; and the ſeeds, contained in the cup, are ſolitary, and of a trigonal or cordated figure. See plate LIII. fig. 4.

COTULA, or COTYLA, in antiquity, a liquid meaſure among the Greeks, equal to the hemina of the Romans, containing half a ſextary, or four acetabula: hence it appears that it contained ten ounces of wine, and nine of oil.

It is obſerved that the cotula was uſed as a dry meaſure as well as liquid one, from the authority of Thucydides, who in one place mentions two cotulæ of wine, and in another two cotulæ of bread.

COTURNIX, the QUAIL, in ornithology, a ſpecies of tetrao, with the line of the eye-brows white, ſaid to be the leaſt bird of the whole order of the gallinæ. See the article GALLINÆ.

It is about the ſize of the fieldfare, and is eſteemed at table.

COTYLA, in anatomy, ſignifies any deep cavity in a bone, in which any other bone is articulated: but it is generally uſed to expreſs the acetabulum, or cavity which receives the head of the thigh-bone. It alſo imports a deep ſinus ſurrounded with large lips.

COTYLEDON, NAVELWORT, in botany, a genus of the decandria-pentagynia claſs of plants, the corolla of which is of a companulato-tubulated form, ſlightly divided into five ſegments which are rolled back; the fruit conſiſts of five oblong, ventricoſe, acuminated capſules, each formed of a ſingle valve, and opening longitudinally inwards: the ſeeds are numerous and ſmall. See plate LIV. fig. 6.

COTYLEDONES, in anatomy, are certain glandular bodies, adhering to the chorion of ſome animals: but no ſuch ſubſtances are obſervable in human bodies, the placenta in the womb ſupplying the place thereof in women. See the article PLACENTA.

COTYTTIA, in antiquity, nocturnal feſtivals in honour of Cotys, or Cotytta, the goddeſs of wantonneſs.

COUARD, or COWARD, in heraldry. See the article COWARD.

COUCH, in painting, a term uſed for each lay or impreſſion of colour, either in oil or water, wherewith the painter covers his canvas, wall, wainſcot, or other matter, to be painted.

The word is alſo uſed for a lay or impreſſion on any thing, to make it more firm and conſiſtent, or to ſcreen it from the weather. Thus, paintings are covered with a couch of varniſh; a canvas to be painted muſt have two couches of ſize, before the colours are laid on; two or three couches of white lead are laid on wood, before the gold is applied. The leather-gilders lay a couch of water and

whites of eggs on the leather, before they apply the gold or ſilver leaf.

The gold wire-drawers alſo uſe the word couch for the gold or ſilver leaf, wherewith they cover the maſs to be gilded or ſilvered. The gilders uſe the term couch, for the quantity of gold or ſilver leaves applied on the metals in gilding and ſilvering.

COUCH, or WET COUCH, in malt-making. See the article MALT.

COUCHANT, in heraldry, is underſtood of a lion, or other beaſt, when lying down, but with his head raiſed, which diſtinguiſhes the poſture of couchant from dormant, wherein he is ſuppoſed quite ſtretched out and aſleep. See plate LIV. fig. 2.

COUCHE', in heraldry, denotes any thing lying along: thus, chevron couché, is a chevron lying ſideways, with the two ends on one ſide of the ſhield, which ſhould properly reſt on the baſe.

COUCHING *of a Cataract*, in ſurgery, one of the two chief methods of curing a cataract, by couching with the needle. See the article CATARACT.

Under the article cataract, the internal and external remedies for the cure of that diſorder, have been preſcribed. Now when recourſe muſt be had to couching, the method of treating it is as follows: having placed the patient in a convenient light and poſture, let the other eye be covered to prevent its rolling: then let the ſuperior eye-lid of that eye affected be lifted up, and the inferior one depreſſed: this done, ſtrike the needle through the tunica conjunctiva, ſomething leſs than one tenth of an inch from the cornea, even with the middle of the pupil, into the poſterior chamber; and gently endeavour to depreſs the cataract with the flat ſurface of it. If after it is diſlodged it riſes again, it muſt again and again be puſhed down. If it is membranous, after the diſcharge of the fluid, the pellicle muſt be more broken and depreſſed If it is uniformly fluid, or exceedingly elaſtic, they ſhould not endanger an inflammation by a vain attempt to ſucceed.

Taylor has deſcribed a new method of couching the cataract by the needle: he, ſecuring the affected eye by a ſpeculum oculi, with a knife, biſtory, or lancet, makes a longitudinal inciſion, through the membranes of the eye, to the vitreous humour, about half a line below the ordinary place: then he directly paſſes a ſlender plano-convex needle into the eye, through the inciſion, with the convex part of it turned upwards, to the inferior part of the cryſtalline humour; after which he gently elevates the point of the needle a little, till he perceives a faint reſiſtance from the cryſtalline humour lying above it, and obſerves its motions through the pupil. When, from theſe ſigns, he knows that the apex of the needle is immediately under the capſule of the cryſtalline humour, he thruſts it downwards to the bottom, in order to divide the vitreous humour, and prepare a ſpace for the reception of the cryſtalline humour, which is afterwards to be depreſſed. After this he withdraws about two lines of the needle, and introduces it into the inferior part of the coat of the cryſtalline humour, the ſituation of which he carefully obſerves, *&c.*

Heiſter remarks upon Taylor's treatiſe of couching, that it is ſwelled and obſcured with frivolous cautions and circumſtances; and that his method of operation is neceſſarily followed with excruciating pains, violent inflammations, and a ſuppuration of the eye, inſtead of recovering the patient's ſight.

After couching, it is thought proper immediately to defend the eye with a compreſs dipt in ſome collyrium, ſecured by a handkerchief, that the retina may not be injured by a too ſtrong action of the light; and leſt, by the patient's ſtraining his eye too ſoon, the cataract be elevated again. It will alſo be convenient to bleed the patient a few hours after the operation. With regard to the ſubſequent dreſſings, it will be convenient to repeat the former four or five times a day.

The needles uſed in this operation are repreſented in plate LV. and marked 1, 2, 3, 4, 5, 6, 7, 8, 9. The ſpeculum is marked 10, and the method of performing the operation, 11.

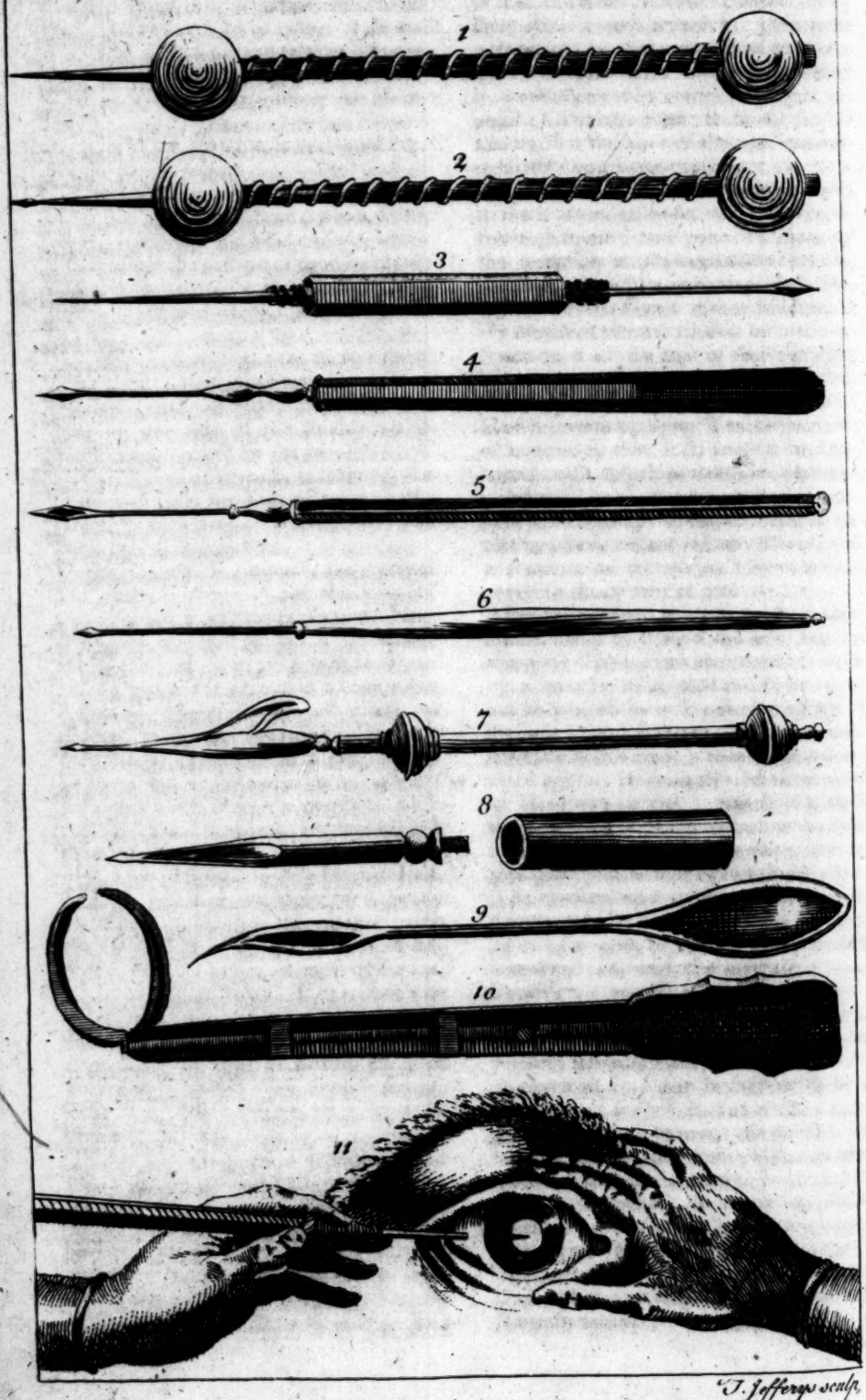
COVENANT, a compact or agreement, made between two or more perſons, to perform ſomething.

A covenant is either in fact or in law. A covenant in fact, is that which is expreſsly agreed on between the parties. In law, it is that covenant which the law intends and implies, though it be not expreſſed in terms; as where a perſon grants a leaſe of a houſe, *&c.* for a certain term, the law will intend a covenant on the leſſor's part, that the leſſee ſhall quietly enjoy the premiſſes during the term againſt all incumbrances.

There

BRITISH MUSEUM

COUCHING INSTRUMENTS



J. Jefferys sculp.

There is alſo a covenant real, and a covenant merely perſonal. A covenant real, is when a perſon binds himſelf to paſs ſome real things, as lands or tenements, or to levy a fine of lands, &c. A covenant perſonal, is when the ſame is altogether perſonal; as if a perſon, by deed, covenants with another to build him a houſe, or to do him ſome other ſervice, &c.

COVENANT *to ſtand ſeized to uſe*, is where a man who has a wife, children, brother, ſiſter, or other kindred, does by deed in writing, under hand and ſeal, covenant and agree, that for their proviſion or preferment, he and his heirs ſhall ſtand ſeized of the land to their uſe, either in fee ſimple, fee-tail, or for life.

COVENTRY, a city and biſhop's ſee in Warwickſhire, ſituated 80 miles north-weſt of London, and 10 miles north of Warwick: weſt long. 1° 26′, and north lat. 52° 25′.

The city, and territory about it, makes a county of itſelf, and ſends two members to parliament; and from it the noble family of Coventry takes the title of earl.

COVERDEN, a town of the united provinces, ſituated in that of Overyſſel, near the confines of Weſtphalia: eaſt long. 6° 45′, and north lat. 52° 30′.

It is a ſtrong fortreſs, as well by nature as by art, being ſituated in the marſhes.

CO-VERSED SINE, in geometry, the remaining part of the diameter of a circle, after the verſed ſine is taken from it. See the article VERSED SINE.

COVERT, in law, ſee COVERTURE.

COVERT WAY, or CORRIDOR, in fortification, a ſpace of ground, level with the field, on the edge of the ditch, three or four fathoms broad, ranging quite round the half moons, and other works toward the country. It has a parapet raiſed on a level, together with its banquets and glacis. The greateſt effort in ſieges, is to make a lodgment on the covert-way, becauſe the beſieged uſually palliſade it along the middle, and undermine it on all ſides.

COVERTURE, in law, is applied to the ſtate and condition of a married woman, who is under the power of her huſband, and therefore called *feme covert*; and diſabled to contract with any perſon to the detriment either of herſelf or huſband, without his conſent and privity; or allowance and confirmation thereof.

If the huſband alien the wife's lands, during the marriage, ſhe cannot gainſay it, while he lives; ſo that every thing belonging to the wife is in the power of the huſband, inſomuch that ſhe is ſaid to have no power over her own perſon, but is alſo in that ſenſe *ſub poteſtate viri*.

COUGH, *tuſſis*, in medicine, a convulſive motion of the diaphragm, muſcles of the larynx, thorax, and abdomen, violently ſhaking, and expelling the air that was drawn into the lungs by inſpiration.

Of theſe convulſive and ſpaſmodic diſorders there are ſeveral kinds, called coughs, proceeding from various cauſes. If the cauſe is in the lungs, there is a difficulty of breathing, which is increaſed upon motion, or agitation of the body or blood: likewiſe there is often a ſhrill voice, a preſſing pain in the breaſt, and a hoarſeneſs. If it be dry, and continues long, there are generally hard tubercles, or vomicæ, full of matter, and the cough is conſumptive: but if it be moiſt, and great plenty of viſcid matter brought up, it is a ſign there is a great collection of matter in the cavity of the lungs: in this diſorder there is a difficulty of lying on the affected ſide, and pure matter, or matter mixed with blood, is brought up, which leaves no room to doubt that the lungs are affected.

Tuſſis ſtomachalis, or a ſtomach-cough, is ſometimes moiſt, and ſometimes dry: if moiſt, a thick and copious ſpittle is brought up after meals, generally with vomiting; the cough is more violent after pectorals and ſweet things, and is moſt troubleſome in a morning.

In a convulſive or hooping-cough, that is violent and dry, the cauſe is chiefly in the nervous coats of the ſtomach, and there is a violent concuſſion of the thorax, with a deep ſound. This is greatly increaſed after cold drink, or acids. In this obſtinate cough, the hypochondria generally are diſordered, or there is a ſcorbutic, or a ſalt diatheſis mixt with the blood; wherefore this cough is not unfrequently attended with a miliary fever. See the article CHIN-COUGH.

If there is a thick coagulated mucus in the bronchia, the root of florentine-orris is proper to be taken: or five or ſix grains of powder of ſquills, with a little nitre, or precipitated ſulphur, flowers of ſulphur, and ſpermaceti. When there is a thin ſalt defluxion, jellies are proper, and decoctions made with barley, ſhavings of hartſhorn, viper-graſs root, and liquorice: or the decoction of turpentine with ſugar; and above all things oil of ſweet almonds, freſh drawn.

When

When a tuſſis catarrhalis affects the whole habit of body, with a loſs of appetite, and a tabes, the cure muſt be attempted with aſſes milk, or whey, or milk with equal parts of Selters water. In a moiſt, laſting, pituitous cough, the body muſt be kept open with manna, two ounces, at leaſt, diſſolved; to which may be added two drams of terra foliata tartari, and a few drops of oil of anniſeed. If the ſtomach will not bear laxatives, clyſters muſt be uſed.

When the cough is outrageous, ſaffron, mixt with bezoardics is very friendly to the breaſt: nor are ſtorax-pills, mixt with the aromatic pills, leſs beneficial. In the *tuſſis ferina*, or cough of the moſt violent kind, ariſing from the ſtriking in of exanthemata, that is, ſpots or breakings out of the ſkin, æthiops mineral is an admirable remedy; or flowers of ſulphur taken inwardly, in the evening, with diaphoretic antimony: likewiſe frictions of the feet and pediluvia are more uſeful to draw ſerum from the breaſt than bliſters. The patient ſhould, as much as poſſible, breathe a temperate air, ſhunning all ſalted and ſmoke dried meats, poignant ſauces, malt-liquors, and more eſpecially acid wines. The drink ſhould be hydromel, or, if the patient is ſcorbutic, water alone, the cold being firſt taken off with toaſted bread. The vulgar, not without ſucceſs, pour hot water upon wheat bran, and drink the infuſion cold. As to bleeding in this diſeaſe, it is neceſſary for thoſe who are full of blood. See the article COLD.

Bliſters may be uſed in obſtinate caſes.

COVIN, among lawyers, a deceitful compact between two or more to deceive or prejudice another perſon. It is generally uſed in and about conveyances of land by fine, feoffment, *&c.* wherein it tends to defeat purchaſers of the land they purchaſe, and creditors of their juſt debts. It is ſometimes made uſe of in ſuits at law, and judgments therein had. But wherever covin is, it ſhall never be intended unleſs it be particularly found by the jury.

COVING, in building, is when houſes are built projecting over the ground-plot, and the turned projecture arched with timber, lathed and plaiſtered.

COVING CORNICHE. See CORNICHE.

COUL, or COWL. See the article COWL.

COULTER, in huſbandry, an iron inſtrument, fixed in the beam of a plough, and ſerving to cut the edge of each furrow. See the article PLOUGH.

COULTER-NEB, in ornithology, the name by which ſome call a ſpecies of duck ſmaller than the common kind, and with the beak flatted on both ſides.

COUNCIL, or COUNSEL, in a general ſenſe, an aſſembly of divers conſiderable perſons to concert meaſures relating to the ſtate.

Aulic COUNCIL. See the article AULIC.

Cabinet COUNCIL. See the article *Privy* COUNCIL, *infra*.

Common-COUNCIL, in the city of London, is a court wherein are made all bye-laws which bind the citizens. It conſiſts, like the parliament, of two houſes, an upper compoſed of the lord mayor and aldermen; and a lower, of a number of common-council-men choſen by the ſeveral wards, as repreſentatives of the body of the citizens.

Privy-COUNCIL, the primum mobile of the civil government of Great Britain, bearing part of that great weight in the government which otherwiſe would be too heavy upon the king.

It is compoſed of eminent perſons, the number of whom is at the ſovereign's pleaſure, who are bound by oath to adviſe the king to the beſt of their judgment, with all the fidelity and ſecrecy that becomes their ſtation. The king may declare to, or conceal from, his privy-council whatever he thinks fit, and has a ſelect council out of their number commonly called the *cabinet council*, with whom his majeſty determines ſuch matters as are moſt important, and require the utmoſt ſecrecy. All proclamations from the king and the privy-council ought to be grounded on law, otherwiſe they are not binding to the ſubject.

Privy-counſellors, tho' but gentlemen, have precedence of all the knights and younger ſons of barons and viſcounts, and are ſtiled right honourable.

COUNCIL *of war*, an aſſembly of the principal officers of an army or fleet, occaſionally called by the general or admiral to concert meaſures for their conduct with regard to ſieges, retreats, engagements, *&c.*

In the french polity, councils are very numerous. They have their council of ſtate, council of finances, council of diſpatches, council of directions, grand council, council of the regency, council of conſcience, *&c.*

COUNCIL, in church-hiſtory, an aſſembly of prelates and doctors met, for the regulating matters relating to the doctrine, or diſcipline, of the church.

National

tional COUNCIL, is an assembly of prelates of a nation under their primate or patriarch. See PRIMATE, *&c.*

cumenical or general COUNCIL, is an assembly which represents the whole body of the universal church. The romanists reckon eighteen of them; Bullinger, in his treatise de Conciliis, six; Dr. Prideaux, seven; and Bishop Beveridge has increased the number to eight, which, he says, are all the general councils which have ever been held since the time of the first christian emperor. They are as follows. 1. The council of Nice, held in the reign of Constantine the great, on account of the heresy of Arius. 2. The council of Constantinople, called under the reign and by the command of Theodosius the great, for much the same end that the former council was summoned. 3. The council of Ephesus, convened by Theodosius the younger, at the suit of Nestorius. 4. The council of Chalcedon, held in the reign of Martianus, which approved of the Eutychian heresy. 5. The second council of Constantinople, assembled by the emperor Justinian, condemned the three chapters taken out of the books of Theodorus of Mopsuestia, having first decided that it was lawful to anathematize the dead. Some authors tell us, that they likewise condemned the several errors of Origen about the trinity, the plurality of worlds, and the pre-existence of souls. 6. The third council of Constantinople, held by the command of Constantinus Pogonatus the emperor, in which they received the definitions of the five first general councils, and particularly that against Origen and Theodorus of Mopsuestia. 7. The second Nicene council. 8. The fourth council of Constantinople, assembled when Lewis II. was emperor of the west. The regulations which they made are contained in twenty seven canons, the heads of which are set down by Mr. Du Pin, to whom the reader is referred.

Provincial COUNCIL, an assembly of prelates of a province under the metropolitan. See the articles PROVINCE and CONVOCATION.

COUNSELLOR, in general, a person who advises another: thus we say, a counsellor at law, a privy counsellor, *&c.*

COUNSELLOR *at law*, a person retained by a client to plead his cause in a public court of judicature. He has a privilege to enforce any thing of which he is informed by his client, if the same be pertinent to the matter in hand, and is not obliged to examine whether it be true or false, it being at the peril of the person who informs him. And notwithstanding counsellors have a special privilege to practise the law, yet they are punishable for misbehaviour by attachment. No counsel is allowed to a prisoner upon a general issue of indictment of felony, unless some point of law arise; for the court is the prisoner's only counsel.

Privy COUNSELLOR. See the article COUNCIL, *supra*.

COUNT, *comes*, a nobleman who possesses a domain erected into a county. The dignity is a medium between that of a duke and a baron. See the article EARL. Counts were originally lords of the court, or of the emperor's retinue, and had their name comites *a comitando*. Eusebius tells us, that Constantine divided them into three classes, of the two first the senate was composed: those of the third had no place in the senate, but enjoyed several other privileges of senators. There were counts that served on land, others at sea; some in a civil, and some in a legal capacity. The quality of count is now no more than a title which a king grants upon erecting a territory into a county, with a reserve of jurisdiction and sovereignty to himself. A count has a right to bear on his arms a coronet adorned with three precious stones, and surmounted with three large pearls, whereof these in the middle, and extremities of the coronet advance above the rest. See CROWN.

COUNT, in law, signifies the original declaration of complaint in a real action, as a declaration is in a personal one.

COUNT-WHEEL, in the striking part of a clock, a wheel which moves round once in twelve or twenty-four hours. It is sometimes called the locking wheel. See the article CLOCK.

COUNTER, a term which enters into the composition of divers words of our language, and generally implies opposition; but when applied to deeds, means an exact copy kept by the contrary party, and sometimes signed by both parties.

COUNTER ALLEY, in gardening. See the article ALLEY.

COUNTER APPROACHES, in fortification, lines and trenches made by the besieged in order to attack the works of the besiegers, or to hinder their approaches.

Line of COUNTER APPROACH, a trench which the besieged make from their covered way to the right and left of the attacks,

attacks, in order to ſcour the enemies works. This line muſt be perfectly enfiladed from the covered way and the half moon, that it may be of no ſervice to the enemy, in caſe he get poſſeſſion of it.

COUNTER-BARRY, or CONTRE-BARRE', in heraldry, is the ſame as our bendy ſiniſter per bend counterchanged. See the article BARRY.

COUNTER BATTERY, is a battery raiſed to play upon another to diſmount the guns. See the article BATTERY.

COUNTER BOND, a bond of indemnification, given to one who has given his bond as a ſecurity for another's payment of a debt, or the faithful diſcharge of his office or truſt.

COUNTER BREAST-WORK, in fortification. See FAUSSE-BRAYE.

COUNTER CHANGED, in heraldry, is when any field or charge is divided or parted by any line or lines of partition, conſiſting all interchangeably of the ſame tinctures. See plate LXII. fig. 2. n° 1.

COUNTER-CHARGE, a reciprocal charge or recrimination brought againſt an accuſer.

COUNTER CHEVRONED, a ſhield chevrony, parted by one or more partition lines.

COUNTER-COMPONED, in heraldry, is when the figure is compounded of two panes, as in plate LXII. fig. 2. n°. 2.

COUNTER DEED, a ſecret writing either before a notary or under a private ſeal, which deſtroys, invalidates, or alters a public one.

COUNTER-DRAWING, in painting, is the copying a deſign, or painting, by means of a fine linen-cloth, an oiled paper, or other tranſparent matter, where the ſtrokes appearing through are followed with a pencil, with or without colour. Sometimes it is done on glaſs, and with frames or nets divided into ſquares with ſilk or with thread, and alſo by means of inſtruments invented for the purpoſe, as the parallelogram.

COUNTER-ERMINE, in heraldry, is the contrary to ermine, being a black field with white ſpots. See plate LXII. fig. 2. n°. 3.

COUNTERFEIT ARCHITECTURE. See the article ARCHITECTURE.

COUNTERFEITS, in our law, are perſons that obtain any money or goods by counterfeit letters or falſe tokens, who being convicted before juſtices of aſſize, or of the peace, &c. are to ſuffer ſuch puniſhment as ſhall be thought fit to be inflicted under death, as impriſonment, pillory, &c.

COUNTER-FISSURE. See the article CONTRA FISSURE.

COUNTER FACED, or CONTRE-FACE', in heraldry, is the ſame that we call barry per pale counterchanged; but then the number of panes into which the field is divided, is always ſpecified. See BARRY.

COUNTER-FOIL, or COUNTER-STOCK, in the exchequer, that part of a tally which is kept by an officer of the court. See the article TALLY.

COUNTER-FORTS, ſpurs or buttreſſes, ſerving as props to a wall ſubject to bulge or be thrown down.

COUNTER-FUGUE, in muſic, is when the fugues go contrary to one another. See the article FUGUE.

COUNTER GAGE, in carpentry, a method uſed in meaſuring the joints. For example, they tranſfer the breadth of a mortiſe to the place in the timber where the tenon is to be, in order to make them fit each other.

COUNTER-GUARD, in fortification, is a work raiſed before the point of a baſtion, conſiſting of two long faces parallel to the faces of the baſtion, making a falliant angle: they are ſometimes of other ſhapes, or otherwiſe ſituated. See the article ENVELOPE.

COUNTER-HARMONICAL. See the article CONTRA-HARMONICAL.

COUNTER-INDICATION. See the article CONTRA INDICATION.

COUNTER-LIGHT, or CONTRE-JOUR, a light oppoſite to any thing, which makes it appear to diſadvantage. A ſingle counter-light is ſufficient to take away all the beauty of a fine painting.

COUNTERMAND, in the engliſh law, is where a thing before executed is by ſome act or ceremony afterwards made void by the party that did it. A countermand may be either actual or implied: actual, where a power to execute any authority is, by a formal writing or deed for that purpoſe, put off for a time, or made void: implied, when a perſon makes his laſt will and teſtament, whereby he deviſes his land to ſuch an one, and afterwards conveys the ſame land to another by feoffment.

COUNTER-MARCH, in military affairs, a change of the face or wings of a battalion, by which means thoſe that were in the front come to be in the rear.

It alſo ſignifies returning, or marching back again.

COUNTER-

COUNTER-MARK, a mark put upon goods that have been marked before. It is alſo uſed for the ſeveral marks put upon goods belonging to ſeveral perſons, to ſhew that they muſt not be opened but in the preſence of them all or their agents.

In goldſmiths works, the counter-mark is the mark punched upon the work at the hall, to ſhew that the metal is ſtandard. With horſe-jockies, the counter-mark is an artful hole made in the teeth of old horſes, to make them paſs for horſes of ſix years old. Counter mark of a medal is a mark added to it a long time after its being ſtruck. It is ſometimes an emperor's head, ſometimes a cornucopia, &c. Counter-marks are diſtinguiſhed from the monograms in this, that being ſtruck after the medal, they are indented; whereas the monograms being ſtruck at the ſame time with the medals, have a little relievo.

COUNTER-MINE, in war, a well and gallery drove and ſunk till it meet the enemy's mine, to prevent its effect.

COUNTER MURE, a wall built cloſe to another, that it may not receive any damage from the contiguous buildings.

COUNTER-MURE, in fortification. See the article CONTRAMURE.

COUNTER-PALED, *contre-pallé*, in heraldry, is when the eſcutcheon is divided into twelve pales parted per feſſe, the two colours being counterchanged; ſo that the upper are of one colour, and the lower of another.

COUNTERPART, in muſic, denotes one part to be applied to another. Thus the baſs is ſaid to be a counterpart to the treble. In law, it is the duplicate or copy of any indenture or deed.

COUNTER-PASSANT, is when two lions are in a coat of arms, and the one ſeems to go quite the contrary way from the other.

COUNTER-PLEA, in law, a croſs or contrary plea, particularly ſuch as the demandant alleges againſt a tenant in courteſy, or dower, who prays the king's aid, &c. for his defence.

COUNTER-POINT, in muſic, the art of compoſing harmony, or of diſpoſing ſeveral parts in ſuch a manner as to make an agreeable whole or a concert. In general, every harmonious compoſition, or compoſition of many parts, is called counter point. It took its name from hence: before notes of different meaſures were invented, the manner of compoſing was to ſet pricks or points one againſt another, to denote the ſeveral concords.

Counter-point is divided into ſimple and figurative, agreeably to the diviſion of harmony into the harmony of concords and that of diſcords.

Simple counterpoint, or the harmony of concords, conſiſts of the perfect as well as the imperfect concords, and may be therefore denominated perfect or imperfect, according as the concords are, whereof it is compoſed. Thus the harmony ariſing from a conjunction of any note with its fifth and octave, is perfect; but with its third and ſixth, imperfect: notwithſtanding this, the compoſition is perfect; it is the particular concords only, that are called imperfect. Now to diſpoſe the concords, or the natural notes and their octaves, in any key in a ſimple counterpoint, obſerve with regard to the diſtinction into perfect or imperfect harmony, this general rule. To the key to the fourth and to the fifth, perfect harmony muſt be joined; to the ſecond, third, and ſeventh, an imperfect harmony is indiſpenſible; to the ſixth, either a perfect or imperfect harmony. But when you keep the key, an imperfect harmony is given the ſixth. In the compoſition of two parts, obſerve, that tho' a third appears only in the treble, or the fourth and the fifth, yet the perfect harmony of the fifth is always ſuppoſed, and muſt be ſupplied in the accompaniments of the thorough baſs to thoſe fundamental notes. For the rules of counterpoint, with regard to the ſucceſſion of concords, it muſt be obſerved, that as much as can be, the parts may proceed by a contrary motion; that is, the baſs may deſcend where the treble aſcends and *vice verſa*. If in a ſharp key the baſs deſcend gradually from the fifth to the fourth, the laſt in that caſe muſt never have its proper harmony applied to it, but the notes that were harmony in the preceding fifth muſt be continued on the fourth: thirds and fifths may follow one another, as often as one has a mind.

Figurative counterpoint is of two kinds. In one, diſcords are introduced occaſionally as paſſing notes, ſerving only as tranſitions from concord to concord: in the other, the diſcord bears a chief part in the harmony. See DISCORD.

For the firſt, nothing but concords are to be uſed in the accented parts of the meaſure: in the unaccented parts, diſcords may paſs without any offence to the ear. This is called by moſt authors ſuppoſition. See SUPPOSITION.

For the ſecond, in which the diſcords are uſed as a ſolid and ſubſtantial part of the harmony, the diſcords that have place are the fifth, when joined with the ſixth, to which it ſtands in relation of a diſcord; the fourth, when joined with the fifth; the ninth, which is the effect of the ſecond and ſeventh, and the ſecond and fourth. Theſe diſcords are introduced into harmony with due preparation, and are to be ſucceeded by concords, which is called the reſolution of diſcords. Now to introduce diſcords into harmony, it muſt be conſidered what concord may ſerve for their preparation and reſolution. The fifth then may be prepared either by an octave, fifth, or third, and reſolved either by third or ſixth. The fourth may be prepared in all concords, and may be reſolved into the ſixth, third, or octave. The ninth may be prepared in all concords except an octave, and may be reſolved into third, ſixth, and octave. The ſeventh may be prepared in all concords, and reſolved into third, ſixth, or fifth. The ſecond and fourth are uſed very differently from the reſt, being prepared and reſolved into the baſs. See the articles HARMONY, CONCORD, DISCORD, KEY, CLEF, MODULATION, *&c.*

COUNTER-POINTED, *contre pointé*, in heraldry, is when two chevrons in one eſcutcheon meet in the points, the one riſing as uſual from the baſe, and the other inverted falling from the chief; ſo that they are counter to one another in the points. They may alſo be counter-pointed when they are founded upon the ſides of the ſhield, and the points meet that way, called counterpointed in feſſe.

COUNTERPOISE, in the manege, is the liberty of the action and ſeat of a horſeman; ſo that in all the motions made by the horſe, he does not incline his body more to one ſide than to the other, but continues in the middle of the ſaddle, bearing equally on his ſtirrups, in order to give the horſe the proper and ſeaſonable aids.

COUNTERPOISE is alſo a piece of metal called by ſome the pear, on account of its figure, and the maſs, by reaſon of its weight, which ſliding along the beam, determines the weight of bodies weighed by the ſtatera romana. See the article BALLANCE.

COUNTER-POISON, an antidote or medicine which prevents the effects of poiſon. See the article POISON.

COUNTER-POTENT, *contre-potencé*, in heraldry is reckoned a fur as well as vair and ermine, but compoſed of ſuch pieces as repreſent the tops of crutches, called in french *potences*, and in old engliſh *potents*.

COUNTER-PROOF, in rolling-preſs printing, a print taken off from another freſh printed; which by being paſſed thro' the preſs gives the figure of the former, but inverted. To counter-prove is alſo to paſs a deſign in black-lead, or red-chalk, through the preſs, after having moiſtened with a ſponge both that and the paper on which the counter-proof is to be taken.

COUNTER-QUARTERED, *contre-ecartelé*, in heraldry, denotes the eſcutcheon, after being quartered, to have each quarter again divided into two.

COUNTER-ROLLS, are the rolls that ſheriffs of counties have with the coroners of their procedings, as well of appeals as of inqueſts.

COUNTER-ROUND, a body of officers going to inſpect the rounds.

COUNTER-SALIENT, is when two beaſts are borne in a coat leaping from each other directly the contrary way.

COUNTER-SCARP, in fortification, is properly the exterior talus or ſlop of the ditch; but it is often taken for the covered way and the glacis. In this ſenſe we ſay, the enemy have lodged themſelves on the counter-ſcarp.

Angle of the COUNTER-SCARP, is that made by the two ſides of the counter-ſcarp meeting before the middle of the curtin.

COUNTER-SIGNING, the ſigning the writing of a ſuperior in quality of ſecretary. Thus charters are ſigned by the king, and counterſigned by a ſecretary of ſtate or lord chancellor.

COUNTER-SWALLOW-TAIL, in fortification, an out-work in form of a ſingle tenaille, wider at the gorge than the head.

COUNTER-TALLY, one of the two tallies upon which any thing is ſcored.

COUNTER-TENOR, called by the French *haut-contre*, one of the middle parts of muſic oppoſite to the tenor. See the article TENOR.

COUNTER-TIME, in the manege, is the defence or reſiſtance of a horſe that interrupts his cadence, and the meaſure of his manege, occaſioned either by a bad horſeman, or by the malice of the horſe.

COUNTER-TRENCH, in fortification. See the article COUNTER-APPROACHES.

COUNTER-TRIPPING, is when two beaſts are borne in a coat in a walking poſture, the

the head of the one being next the tail of the other.

COUNTER VALLATION, in the military art, a ditch made round a beſieged place, to prevent the garriſon from making ſallies. See CONTRAVALLATION.

COUNTER-WORKING, the raiſing of works to oppoſe thoſe of the enemy.

COUNTER is alſo the name of a counting-board in a ſhop, and of a piece of metal with a ſtamp on it, uſed in playing at cards.

COUNTER *of a horſe*, that part of a horſe's forehand which lies between the ſhoulders and under the neck.

COUNTERS *in a ſhip*, are two. 1. The hollow arching from the gallery to the lower part of the ſtraight piece of the ſtern, is called the upper counter. 2. The lower counter is between the tranſom and the lower part of the gallery.

COUNTER is alſo the name of two priſons in the city of London, *viz.* the Poultry and Woodſtreet.

COUNTORS, ſuch ſerjeants at law as a perſon retains to defend his cauſe, and ſpeak for him in any court for their fees; being antiently called ſerjeant-counters.

COUNTING, or ACCOUNTING. See the article ACCOUNTING.

COUNTRY, among geographers, is uſed indifferently to denote either a kingdom, province, or leſſer diſtrict. But its moſt frequent uſe is in contradiſtinction to town: thus it is ſaid, that ſuch a man went down into the country.

Among miners, the term countries is an appellation given to works under ground. See the article MINE.

COUNTRY-WAKE. See WAKE.

Faſt COUNTRY, or SHELF. See the article SHELF.

COUNTY, in geography, originally ſignified the territory of a count or earl, but now it is uſed in the ſame ſenſe with ſhire. See the article SHIRE.

England, for the better government thereof, and the more eaſy adminiſtration of juſtice, is divided into fifty-two counties, each whereof is ſubdivided into rapes, lathes, wapentakes, hundreds; and theſe again into tythings. For the execution of the laws in the ſeveral counties, excepting Cumberland, Weſtmoreland, and Durham, every Michaelmas term officers are appointed, called ſheriffs: other officers of the ſeveral counties are lord-lieutenants, cuſtodes rotulorum, juſtices of the peace, bailiffs, high conſtables, coroner, clerks of the market, *&c.*

Of the fifty-two counties in England and Wales, there are four termed counties-palatine, *viz.* Lancaſter, Cheſter, Durham, and Ely: theſe counties are reckoned among the ſuperior courts, and are privileged as to pleas, ſo that no inhabitant of ſuch counties ſhall be compelled by any writ to appear, or anſwer the ſame, except for error, and in caſes of treaſon, *&c.*

The counties-palatine of Durham and Cheſter are by preſcription, where the king's writs ought not to come, but under the ſeal of the counties palatine, unleſs it be a writ of proclamation. There is a court of chancery in the counties-palatine of Lancaſter and Durham, over which there are chancellors. See the article CHANCELLOR.

Scotland is divided into thirty-three counties, the government of which is committed to ſheriffs. See SHERIFF.

COUNTY-CORPORATE, a title given to ſeveral cities on which the engliſh monarchs have thought proper to beſtow extraordinary privileges, annexing to them a particular territory of land, or juriſdiction as the county of Middleſex, annexed to the city of London, the county of the city of York, the county of the city of Briſtol, *&c.*

COUNTY-COURT, a court of juſtice, held every month in each county, by the ſheriff or his deputy. See COURT.

This court has the determination of debts and treſpaſſes under forty ſhillings.

COUP DE BRIDE, in the manege, the ſame with ebrillade. See EBRILLADE.

COUPED, *coupé*, in heraldry, is uſed to expreſs the head, or any limb, of an animal, cut off from the trunk, ſmooth; diſtinguiſhing it from that which is called eraſſed, that is, forcibly torn off, and therefore is ragged and uneven.

COUPED is alſo uſed to ſignify ſuch croſſes, bars, bends, chevrons, *&c.* as do not touch the ſides of the eſcutcheon, but are, as it were, cut off from them.

COUPER, COWPER, or COOPER, the name of two towns of Scotland, the one ſituated about twelve miles north-eaſt of Perth, in the ſhire of Angus, weſt long. 3°, and north lat. 56° 30′; and the other in the county of Fife, about ten miles weſt of St. Andrews: weſt long. 2° 40′, and north lat. 56° 20′.

COUPLE-CLOSS, in heraldry, the fourth part of a chevron, never borne but in pairs,

except there be a chevron between them, ſaith Guillim, though Bloom gives an inſtance to the contrary.

COUPLET, a diviſion of a hymn, ode, ſong, *&c.* wherein an equal number, or equal meaſure, of verſes is found in each part; which diviſion, in odes, are called ſtrophes. See the article STROPHE.

Couplet, by an abuſe of the word, is frequently made to ſignify a couple of verſes.

COURANT, or CURRANT, in a general ſenſe, expreſſes the preſent time, as we ſay, the year 1763 is the currant year; the 20th day of this currant month, that is, this preſent year and month.

COURANT, in a commercial ſenſe, any thing that has a courſe, or is received in commerce; as the courant coin, *&c.* alſo the ordinary and known price of goods, *&c.* in which ſenſe we ſay, the price courant.

COURANT, in muſic and dancing, is uſed to expreſs the air and tune, and the dance to it.

With regard to muſic, courant is a piece of muſical compoſition in a triple time, and is ordinarily noted in a triple of minims, the parts to be repeated twice.

It begins and ends when he, who beats the meaſure, falls his hand with a ſmall note before the beat; in contradiſtinction from the ſaraband, which ordinarily ends when the hand is raiſed.

With regard to dancing, it conſiſts of a time, a ſtep, a balance, and a coupee; admitting alſo of other motions.

COURIER, a meſſenger ſent poſt, or expreſs, to carry diſpatches. See POST.

Couriers are diſtinguiſhed into four kinds, *viz.* thoſe on horſeback, thoſe in chariots, thoſe in boats, and thoſe on foot; which laſt kind is uſed in Italy, Turkey, and Peru: they were called by the Greeks *hemerodromi*: ſeveral of the antient writers mention, that ſome of theſe would go thirty, thirty ſix, and, in the circus, even forty leagues a day; but it does not appear, that either the Greeks or Romans had any regular couriers till the time of Auguſtus.

COURLAND, a dutchy ſituated between 21° and 26° of eaſt longitude, and between 56° 30′, and 57° 30′ north latitude. It is bounded by the river Dwina, which divides it from Livonia, on the north; by Lithuania, on the eaſt; by Samogitia, on the ſouth; and by the Baltic ſea, on the weſt, being 130 miles long, and 30 broad. It is uſually reckoned a part of Poland; but it is to be obſerved, that the Courlanders not only elect their own princes, but are governed by their own laws. Its Capital is Mittau.

COURSE, in navigation, that point of the compaſs, or horizon, on which the ſhip ſteers: or the angle between the rhumb-line and the meridian. See the articles SAILING, RHUMB LINE, and MERIDIAN.

COURSE, in architecture, a continued range of ſtones, level, or of the ſame height throughout the whole length of the building, without being interrupted by any aperture.

COURSE *of plinths*, the continuity of a plinth of ſtone, or plaiſter, in the face of a building, to mark the ſeparation of the ſtones.

COURSES, in a ſhip, the mainſail and foreſail: when the ſhip ſails under them only, without lacing on any bonnets, ſhe is then ſaid to go under a pair of courſes. To ſail under a main courſe and bonnets, is to ſail under a mainſail and bonnet.

COURSE is uſed for a collection or body of laws, canons, or the like. As, the civil courſe is the collection of the roman law compiled by order of Juſtinian; canonical courſe, the collection of the canon law, made by Gratian. See the articles CIVIL-LAW and CANON LAW.

COURSE is alſo made to expreſs the elements of an art, explained either by experiment or writing.

COURSE is alſo applied for the time ſpent in learning the elements of a ſcience: as a ſtudent is ſaid to go through his courſes of philoſophy, divinity, mathematics, *&c.* at the univerſity.

COURSE *of the moon*. See MOON.

Complement of the COURSE. See the article COMPLEMENT.

COURSE *of a river*. See RIVER.

COURSING, among ſportſmen, is of three ſorts, *viz.* at the deer, at the hare, and at the fox. Theſe courſings are with greyhounds; for the deer there are two ſorts of courſings, the one with the paddock, the other, either in the foreſt, or purlieu. See the article PADDOCK, *&c.*

In courſing the hare, the beſt way is to find one ſitting, and when ſhe is firſt ſtarted, to give her ground, or law, which is generally twelve-ſcore yards. In courſing a fox, you are to ſtand cloſe, and on a clear wind.

COURT, *curia*, in a law ſenſe, the place where judges diſtribute juſtice, or exerciſe

ciſe juriſdiction; alſo the aſſembly of judges, jury, &c. in that place.

Courts are divided into ſuperior and inferior, and into courts of record and baſe courts; again, courts are either ſuch as are held in the king's name, as all the ordinary courts, or where the precepts are iſſued in the name of the judge, as the admiral's court.

The ſuperior courts are thoſe of the king's-bench, the common-pleas, the exchequer and the court of chancery. See the articles KING'S-BENCH, COMMON-PLEAS, EXCHEQUER, and CHANCERY.

A court of record, is that which has a power to hold plea, according to the courſe of the common law, of real, perſonal, and mixt actions; where the debt or damage is forty ſhillings, or above, as the court of king's-bench, &c.

A baſe court, or a court not of record, is where it cannot hold plea of debt, or damage, amounting to forty ſhillings, or where the proceedings are not according to the courſe of the common law, nor inrolled; ſuch as the county-court, courts of hundreds, court-baron, &c.

The rolls of the ſuperior courts of record are of ſuch authority, as not to admit of any proof againſt them, they being only triable by themſelves: but the proceedings of baſe courts may be denied, and tried by a jury. Some of the courts may fine, but not impriſon a perſon, ſuch as the leet; and ſome can neither fine not inflict puniſhment, and can only amerce, as the county-court, court-baron, &c. But the courts of record at Weſtminſter-hall, have power to fine, impriſon, and amerce; and in thoſe courts the plaintiff need not ſhew, in his declaration, that the cauſe of action ariſes within their juriſdiction, being general; though, in inferior courts, it muſt be ſhewed at large, on account they have particular juriſdictions.

COURT *of admiralty*. See ADMIRALTY-*Court*.

COURT *of arches*. See ARCHES.

COURT *of attachment*. See the article ATTACHMENT.

COURT *of augmentation*. See the article AUGMENTATION.

COURT-BARON, a court that every lord of a manor has within his own precincts. This court muſt be held by preſcription, and is of two kinds, *viz.* by common law, and by cuſtom: the former is where the barons or freeholders, being ſuitors, are the judges; the other is, that where the lord, or his ſteward, is the judge.

COURT *of chivalry*, or the *marſhal's* COURT, that whereof the judges are the lord high conſtable, and the earl marſhal of England.

This court is the fountain of martial law, and the earl marſhal is not only one of the judges, but is to ſee execution done. See the article CHIVALRY.

COURT *of conſcience*, a court in the cities of London, Weſtminſter, and ſome other places, that determines matters in all caſes, where the debt or damage is under forty ſhillings.

COURT *of delegates*, a court where delegates are appointed by the king's commiſſion, under the great ſeal, upon an appeal to him from the ſentence of an archbiſhop, &c. in eccleſiaſtical cauſes; or of the court of admiralty, in any marine cauſe.

COURT *of huſtings*, a court of record held at Guildhall, for the city of London, before the lord mayor and aldermen, ſheriffs and recorder, where all pleas real, perſonal, and mixt, are determined; where all lands, tenements, &c. within the ſaid city, or its bounds, are pleadable in two huſtings; the one called the huſtings of plea of lands, and the other the huſtings of common pleas. The court of huſtings is the higheſt court within the city, in which writs of exigent may be taken out, and out-lawries awarded, wherein judgment is given by the recorder. To the lord mayor and city of London belong ſeveral other courts, as the court of common-council, conſiſting of two houſes, the one for the lord mayor and aldermen, and the other for the commoners; in which court are made all by-laws, which bind the citizens. The chamberlain's court relates to the rents and revenues of the city, to the affairs of ſervants, &c. See CHAMBERLAIN.

To the lord mayor belongs the court of coroner and eſcheator; another court for the converſation of the river of Thames; another of gaol delivery, held eight times a year at the Old Baily, for the trial of criminals, where the lord mayor himſelf is the chief judge.

There are alſo other courts called ward-motes, or meetings of the wards; and courts of halymote, or aſſemblies of the guilds and fraternities.

COURT-LEET, a court ordained for the puniſhment of offences under high treaſon againſt the crown.

COURT-MARTIAL, a court appointed for the

the punishing offences in officers, soldiers, and sailors, the powers of which is regulated by the mutiny-bill.

COURT *of piepowder*. See the article PIE-POWDER-COURT.

COURT *of requests*, was a court of equity, of the same nature with the chancery, but inferior to it. It was chiefly instituted for the relief of such petitioners as in conscionable cases addressed themselves to his majesty: the lord privy-seal was the chief judge of this court.

COURT *of the lord steward of the king's house*. See the article STEWARD.

COURT *of the star-chamber*. See the article STAR-CHAMBER.

COURT *of the university*. See UNIVERSITY.

Bishop's COURT. } See the articles { BISHOP.
Christian COURT. } { CHRISTIAN.
County COURT. } { COUNTY.
Dutchy COURT. } { DUTCHY.
Honour COURT. } { HONOUR.
Lawless COURT. } { LAWLESS.

Prerogative COURT, *&c.* See the article PREROGATIVE, *&c.*

COURT is also an appendage to a house or habitation, consisting of a piece of ground, inclosed with walls, but open at top. The court before the house is called the fore-court, and that behind, the back-court.

COURT is also used for the palace or place where a king or sovereign prince resides.

COURTAIN, or CURTIN. See CURTIN.

COURTENAI, a town of the isle of France, about fifty-five miles south-east of Paris: east long. 3°, and north lat. 48°.

COURTESY, or CURTESY *of England*, a certain tenure whereby a man marrying an heiress seized of lands of fee simple, or fee tail general, or seized as heir of the tail special, and getteth a child by her that cometh alive into the world, tho' both it and his wife die forthwith; yet if she were in possession, he shall keep the land during his life, and is called *tenant per legem Angliæ*, or tenant by the courtesy of England; because this privilege is not allowed in any country except Scotland, where it is called *curialitas Scotiæ*.

COURTISAN, a woman who prostitutes herself for hire, especially to people of superior rank.

The Venetians, who had expelled the courtisans their city, were obliged to recal them, to provide for the security of women of honour, and to prevent the nobles from meddling too much in affairs of state.

COURTRAY, a town of the austrian Netherlands, situated on the river Lys, about twenty-three miles south-west of Ghent, and fourteen east of Ypres: east long. 3° 10′, and north lat. 50° 48′.

COUSIN, a term of relation between the children of brothers and sisters, who in the first generation are called cousin-germans, in the second generation, second cousins, *&c.* If sprung from the relations of the father's side, they are denominated paternal cousins; if on the mother's, maternal.

Before the time of Theodosius, there was no law, ecclesiastical or civil, to prohibit the marriage of cousin-germans: under the reign of that emperor they were forbidden, but allowed again in the next reign, and under Justinian, who fixed the allowance in the body of his laws, but still the canons continued the prohibition, and extended it to a greater degree.

COUSIN is also an honorary title bestowed by kings on peers, princes of the blood, cardinals, and distinguished persons in the state.

COUSINAGE, or COSENAGE. See the article COSENAGE.

COUSSINET, in architecture, the stone that crowns a piedroit, or pier, the under side of which is level, and the upper curved to receive the first spring of an arch or vault. It is also the face on the side of the volutes in the ionic capital, which the french artists call balustre and oreiller.

COUSU, in heraldry, signifies a piece of another colour or metal placed on the ordinary, as if it were sewed on, as the word imports. This is generally of colour upon colour, or metal upon metal, contrary to the general rule of heraldry.

COUTANCES, a port-town and bishop's see in Normandy, in France, about 100 miles west of Rouen: west long. 1° 32′. and north lat. 49° 10′.

COUTRAS, a town of Guienne, in France, about twenty miles north-east of Bourdeaux: west long. 16°, and north lat. 45° 5′.

COVERT, in heraldry, denotes something like a piece of hanging, or a pavilion falling over the top of a chief or other ordinary, so as not to hide but only to be a covering to it.

COW, in zoology, the female of the ox-kind. See the articles BOS and OX.

The marks of a good cow, according to some, are these: the forehead should be broad,

broad, the eyes black, the horns large and clean, and the neck long and ſtraight. The belly alſo ſhould be large and deep, the thighs thick, the legs round, with ſhort joints, and the feet broad and thick. As to colour, the red cow is ſaid to give the beſt milk, and the black to bring forth the beſt calves; but the cow that gives milk longeſt, is the moſt beneficial both for breeding and profit; and the moſt proper time to calve in, is March or April. Before calving, ſhe ſhould be put into good paſture, or, if it happen in winter, ſhould be well fed with hay; and the day and night after ſhe has calved, her drink ſhould be a little warmed. See the articles CALF, MILK, BUTTER, CHEESE, *&c.*

Sea-COW, in zoology, the ſame with the thrichecus. See THRICHECUS.

COW-ITCH, in botany, the engliſh name of the hairy phaſeolus. See PHASEOLUS.

COWSLIP, *primula veris*, in botany. See the article PRIMULA.

COWSLIP *of Jeruſalem*, the ſame with the pulmonaria of authors. See the article PULMONARIA.

COWARD, in heraldry, a term given to a lion borne in an eſchutcheon with his tail doubled, or turned in between his legs.

COWES, a town and harbour on the northern coaſt of the iſle of Wight, ſituated about eight miles ſouth of Portſmouth: weſt long. 1° 25′, and north lat. 53° 45′.

COWL, or COUL, a habit worn by the bernardins, and benedictines, of which there are two kinds, one white, very large, worn in ceremonies; the other black, worn on ordinary occaſions in the ſtreets, *&c.* The author of the apology of the emperor Henry IV. diſtinguiſhes two forms of cowls, the one a gown reaching to the feet, having ſleeves and a capuchin; the other a kind of hood to work in, called a ſcapulary, becauſe it only covers the head and ſhoulders.

COWPER, or COUPER, in geography. See the article COUPER.

COWRING, in falconry, a term uſed when a young hawk quivers and ſhakes her wings in token of obedience to the old ones.

COXÆ OSSA, in anatomy, called alſo oſſa innominata. See INNOMINATA.

COXSWAIN, or COCK-SWAIN, in the ſea-language. See COCK-SWAIN.

COXWOLD, a market-town in the north riding of Yorkſhire, about fourteen miles north of the city of York: weſt long. 50′, and north lat. 54° 20′.

COZUMEL, an iſland near the weſtern coaſt of Jucatan, where Cortez landed and refreſhed his troops, before entering upon the couqueſt of Mexico: weſt long. 89°, and north lat. 13°.

CRAB, in zoology, the engliſh name of the ſhort-tailed ſquillæ, more uſually called cancers, or cancri. See the articles CANCER and SQUILLA.

CRAB'S CLAWS, *chælæ cancrorum*, in the materia medica, are the tips of the claws of the common crab broken off at the verge of the black part, ſo much of the extremity of the claws only being allowed to be uſed in medicine as is tinged with this colour. The blackneſs however is only ſuperficial: they are of a greyiſh white within, and when levigated, furniſh a tolerably white powder.

Crab's claws are of the number of the alkaline abſorbents, but they are ſuperior to the generality of them in ſome degree, as they are found on a chemical analyſis to contain a volatile urinous ſalt. They are always kept in the ſhops levigated to a fine powder, and are ſometimes preſcribed ſingly, tho' rarely, becauſe of their want of the beautiful white colour of ſome of the others. They are the baſis, however, of the famous gaſcoign powder, the lapis contrayerva, and many other of the compound ſudorific powders.

CRAB'S EYES, *oculi cancrorum*, in pharmacy, are a ſtrong concretion in the head of the cray-fiſh. They are rounded on one ſide, and depreſſed and ſinuated on the other, conſiderably heavy, moderately hard, and without ſmell. We have them from Holland, Muſcovy, Poland, Denmark, Sweden, and many other places, ſome of them probably taken out of the heads of the animals, but the far greateſt part picked up on the ſhores of the Baltic, and of other ſeas, and large rivers. They pay $9\frac{10}{100}$d. the pound on importation, and draw back $8\frac{16}{100}$d. on exportation.

Crab's eyes are much uſed both in the ſhop-medicines and extemporaneous preſcriptions, being accounted not only abſorbent and drying, but alſo diſcuſſive and diuretic. Fictitious and adulterated crab's eyes are ſometimes ſold by impoſtors, who prepare them of tobacco-pipe clay; but the fraud is eaſily detected, becauſe they want the lamellated contexture of the others, which is diſcovered in calcining them, and are heavier than thoſe of the genuine kind.

CRAB, an engine of wood, with three claws, placed

placed on the ground like a capſtan, and uſed at launching, or heaving ſhips into the dock. See plate LVIII. fig. 2.

CRABRO, the HORNET, in zoology, makes a ſpecies of apis. See the articles APIS and HORNET.

CRACKER, in ornithology, the engliſh name of a ſpecies of duck, called alſo the ſea-pheaſant, and the anas caudacuta. See the article ANAS.

It is about the ſize of the common widgeon.

CRACOW, by ſome accounted the capital city of Poland, is ſituated in the province of little Poland, and palatinate of Cracow, in a fine plain near the banks of the Viſtula.

It has an univerſity, and is the ſee of a biſhop, and the ſeat of the ſupreme courts of juſtice: it ſtands about 140 miles ſouth-weſt of Warſaw, in 19° 30′ of eaſt long. and 50° north lat.

CRADLE, a well known machine in which infants are rocked to ſleep.

It denotes alſo that part of the ſtock of a croſsbow where the bullet is put.

CRADLE, in ſurgery, a caſe in which a broken leg is laid after being ſet.

CRADLE, among ſhipwrights, a timber frame made along the outſide of a ſhip by the bilge, for the convenience of launching her with eaſe and ſafety. See plate LVIII. fig. 3.

CRAFT, in the ſea-language, ſignifies all manner of nets, lines, hooks, &c. uſed in fiſhing. Hence all ſuch little veſſels as ketches, hoys, and ſmacks, &c. uſed in the fiſhing trade, are called ſmall craft.

CRAIL, or CARBIL, a parliament-town of Scotland, ſituated on the ſea-coaſt of the county of Fife, about ſeven miles ſouth-eaſt of St. Andrews: weſt long. 2° 20′, and north lat. 56° 17′.

CRAION, or CRAYON. See CRAYON.

CRAMBE, *wild* SEA-CABBAGE, in botany, a genus of the tetradynamia ſiliquoſa claſs of plants, the flower of which is tetrapetalous and cruciform: the fruit is a roundiſh capſule, with one cell and two valves, containing a ſingle roundiſh ſeed.

This plant is uſed as an aliment like other cabbage, when very young, but is eſteemed more hot and dry. Dale tells us, the leaves heal wounds, and diſcuſs inflammations and other tumours.

CRAMP, in medicine, a convulſive contraction of a muſcular part of the body, being either natural, as in convulſive conſtitutions, or accidental, from living in cold places, under ground, &c. It affects all parts indifferently, but the ham, calves, feet and toes, oftener than the arms and hands: it is ſeldom mortal, tho' its returns are often, quick, and continuance long, with great pain and diſtenſion of ſome veſſels, as appears from the knots and ganglions it occaſions. If it be natural, obſerve the cure as in an epilepſy or convulſions; if accidental, it is removed by rubbing the part affected.

CRAMP-FISH, the engliſh name of the torpedo. See the article TORPEDO.

CRAMP-IRON, or CRAMPS, a piece of iron bent at each end, which ſerves to faſten together pieces of wood, ſtones, or other things.

CRAMPONE'E, in heraldry, an epithet given to a croſs which has at each end a cramp or ſquare piece coming from it; that from the arm in chief towards the ſiniſter angle, that from the arm on that ſide downwards, that from the arm in baſe towards the dexter ſide, and that from the dexter arm upwards. See plate LXII. fig. 3.

CRAMPOONS, pieces of iron hooked at the ends for the pulling up of timber, ſtones, &c.

CRANAGE, the liberty of uſing a crane at a wharf, and alſo the money paid for drawing up wares out of a ſhip, &c. with a crane. See the article CRANE.

CRANE, in ornithology, the engliſh name of the grus. See the article GRUS.

In plate LVI, fig. 2. are repreſented two tall and ſtately crowned african cranes, which, when their heads are raiſed, ſeem more than a yard in height.

CRANE, in mechanics, a machine uſed in building and commerce for raiſing large ſtones and other weights.

A crane is an inſtrument of ſuch general uſe, that we cannot avoid giving its deſcription at large. It is of two kinds; in the firſt, only the gibbet moves upon the axis; and in the ſecond kind, called the rat-tailed crane, the whole crane with its load turns upon a ſtrong axis.

The firſt ſort of crane is repreſented plate LVII. fig. 1. ſeen in profile. L B E D, is a ſection of that part of the wharf on which it is fixed, L B being the horizontal line. A C is a ſtrong horizontal piece of timber making the upper part of the crane, into which are framed the three upright pieces X, Y, Z, with its cill I E, and braces H I and *b* E. To the abovementioned horizontal piece is faſtened, with ſtrong iron pins, a ſhort piece *p p*, having a bell-metal collar to receive the iron

Fig. 1. CROWFEET.

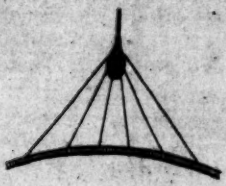


Fig. 2.
CROWNED AFRICAN CRANES.

J. Jeffreys sculp.

BRITISH MUSEUM

BRITISH MUSEUM

Fig. 1. CRANES.

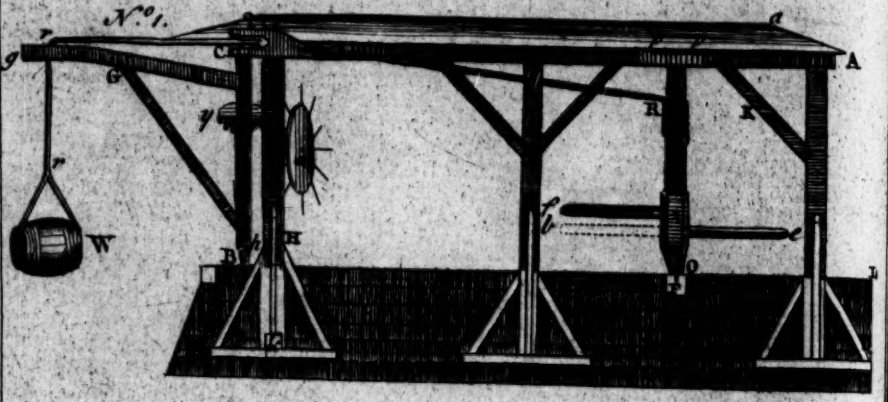




Fig. 5. CROW.

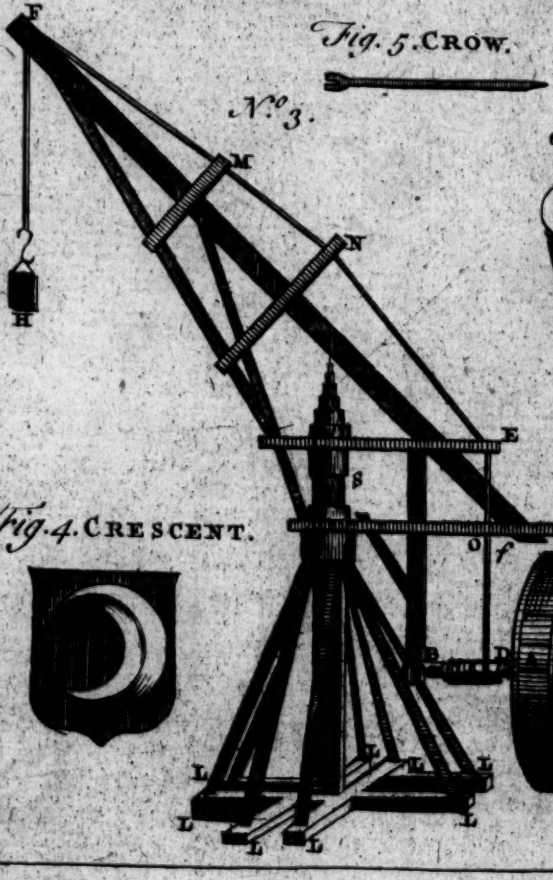


Fig. 2. CRUCIBLES

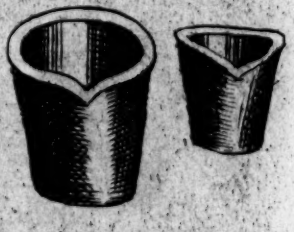
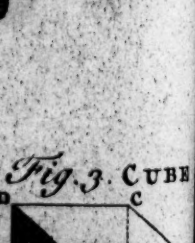


Fig. 4. CRESCENT.

Fig. 3. CUBE



T. Jefferys

iron pivot of the upright ſhaft R F, which is an axis in peritrochio, whoſe lower end is alſo of iron, turning in another bell-metal collar let into the firm piece of wood F. This upright wooden axle with its bars *e*, *f*, *b*, is called the capſtane of the crane, and the rope R *r r*, which goes firſt over the pully T, then between the pullies P and Q, and laſtly over the pully *r*, has at its ends a double iron hook called a ram's head, to which the goods W to be craned up are faſtened. The gibbet G V B is moveable upon its axis C B, ſo that when the weight is raiſed up ſufficiently high, it may be eaſily brought from over the ſhip or barge to any carriage on the wharf to the right or left of the piece Z. N° 2. ſhews the plane of the upper part of the crane, where we are to obſerve the poſition of the pullies P and Q, and of the place of the center of the gibbet, which muſt be at C, in a line touching the circumference of both pullies; becauſe if the center of the motion of the gibbet were in a line with the center of the pullies, the loaded gibbet would require a force to bring its end *g* over the wharf, and that force ceaſing to act, the weight and gibbet would turn back, and reſt over W.

This crane is very expeditious with many hands, it being always requiſite that ſome ſhould ſtand at the bars to keep the weight from running down again, which might be of dangerous conſequence.

The rat-tailed crane, which is repreſented *ibid.* n° 3. is not only uſeful on a wharf to crane up heavy goods, but alſo of great ſervice, in building, to raiſe great ſtones, and bring them round to any deſtined place. It conſiſts of the following parts. On the croſs ground cills L L L L L L is fixed by oblique braces the ſtrong upright piece K called the gudgeon of the crane, on whoſe ſpindle S, ſometimes made wholly of iron, the whole machine turns, being eaſily moved when it is charged with its load H. C A is the counter wheel with its axis D B, bearing only on the iron ends of the ſaid axis in two hanging perpendicular pieces at B and *b*; *f* F is the brace and ladder whoſe top F carries the pully above the weight, the other pullies being in the ends of the pieces M, N, E. The power is ſometimes applied by means of a rope on the outer circumference of the wheel A, but moſt commonly men, a horſe, or an aſs, turn the wheel round by walking in it.

Various improvements have been made on the rat-tailed crane; thus, in plate LVIII. fig. 1. n°. 1. is repreſented one with a double axis in peritrochio and two handles, whereby four men may raiſe very great weights; and being capable of turning about upon the upright ſhaft, may be fixed in any poſition to let them down into barges, boats, or the like. It differs from the preceding one, not only as the long neck is here of one piece, but the power differently applied. Here too the many accidents that happen by the careleſſneſs of workmen, are prevented by a peculiar contrivance: A B (*ibid.* n°. 2.) is the great wheel, moveable on the center pin *a*, by means of handles fixed at C to the leſſer or pinion-wheel, upon the axis of which is the catchet-wheel D *d*: the teeth of this laſt wheel ſucceſſively receive the iron catch F *f* (moveable on a pin F on the ſtandard G, and occaſionally raiſed by the upright iron H *b*) to hinder the weight from going back when the handles are looſened. Upon the ſame axis, and behind the wheel D *d*, is a wooden wheel E *p*, over which ſtands the half ring of iron O P *o*, with a groove in it to fit the circumference of the ſaid wheel, ſo as to regulate the motion of the pinion C, and conſequently of the great wheel A B, and rope V A. The lever K L regulates all theſe motions; for when the ſtring Q *q* K is pulled, this lever, moveable on its center M, raiſes the piece H *b* by a horizontal pin at I, whereby the catch F *f* is freed from the teeth: hence a ſtrong pull by the guider at Q, ſtops the whole motion, and a more gentle one regulates the deſcent.

Chimney CRANE, a kitchen utenſil for hanging a pot, or the like, on; and being moveable, wafts it off and on the fire at pleaſure. See plate LVIII. fig. 4.

For the principles by which cranes act, ſee the articles AXIS *in* PERITROCHIO, PULLEY, *&c.*

CRANE is alſo a name given to the ſiphon. See the article SIPHON.

CRANE's BILL, among ſurgeons, a kind of forceps, ſo called from its figure.

CRANE's BILL, in botany, the engliſh name of the geranium. See GERANIUM.

CRANE-LINES, in a ſhip, are lines going from the upper end of the ſprit-ſail top-maſt, to the middle of the fore-ſtays. They ſerve to keep the ſprit-ſail-top maſt upright and ſteady in its place, and to ſtrengthen it.

CRANGANOR, a dutch factory on the

Malabar-coaſt, in the hither India, about thirty miles north of Cochin: eaſt long. 75° 5′, and north lat. 10°.

CRANIOLARIA, in botany, a genus of the didynamia-angioſpermia claſs of plants, the flower of which conſiſts of one unequal petal: the pericarpium is coriaceous, ovated, acute on both ſides, and bivalvular: the fruit is a woody depreſſed nut, acuminated on both ſides, and marked with dentated furrows.

CRANIUM, in anatomy, denotes the ſkull. See the article SKULL.

CRANK, a contrivance in machines, in manner of an elbow, only of a ſquare form, projecting from a ſpindle, and ſerving by its rotation, to raiſe and fall the piſtons of engines.

CRANK, likewiſe denotes the iron ſupport for a lantern, or the like; alſo the iron made faſt to a ſtock of a bell for ringing it.

In the ſea-language, a ſhip is ſaid to be crank-ſided when ſhe can bear but ſmall ſail, for fear of over-ſetting; and when a ſhip cannot be brought on the ground without danger, ſhe is ſaid to be crank by the ground.

CRANNY, in glaſs-making, an iron inſtrument wherewith the necks of glaſſes are formed.

CRAPE, in commerce, a kind of ſtuff, made in the manner of gauze, with raw ſilk, gummed and twiſted on the mill.

CRAPULA, among phyſicians, the ſame with ſurfeit. See SURFEIT.

CRASIS, among phyſicians, is uſed to ſignify ſuch a due mixture of qualities in a human body, as conſtitutes a ſtate of health.

CRASIS, in grammar, the contraction of two letters into one long one, or a diphthong. Thus αληθεα is contracted into αληθη.

CRASPEDARIA, in zoology, a genus of animalcules, without any tail or limbs, but with an apparent mouth, and a ſeries of fimbriæ round it in the manner of a fringe: ſome ſpecies of craſpedaria are roundiſh, others oval, and others cylindric.

CRASSAMENTUM, in phyſic, the thick red, or fibrous part of the blood, otherwiſe called cruor, in contradiſtinction to the ſerum, or aqueous part. See the article BLOOD.

CRASSENA, a term uſed by Paracelſus, to expreſs certain ſaline, putrefactive and corroſive particles, which produce ulcers and tumours.

CRASSIROSTRÆ, a name given to the ſparrow, and the like birds, on account of their ſhort and thick beaks.

CRASSULA, in botany, a genus of the pentandria-pentagynia claſs of plants, the flower of which is of the infundibuliform ſhape, compoſed of five petals, with long, linear, ſtraight, connivent ungues: the fruit is compoſed of five oblong, acuminated, ſtraight, compreſſed capſules, opening longitudinally inwards; the ſeeds are numerous and ſmall.

CRATÆGUS, in botany, a genus of plants belonging to the icoſandria-digynia claſs, the flower of which conſiſts of five roundiſh, concave, ſeſſile petals, inſerted into the cup; the fruit is a fleſhy, roundiſh, umbilicated berry, containing two diſtinct nearly oblong, cartilaginous ſeeds. The fruit of this plant is aſtringent and binding, and is commended in fevers attended with a diarrhœa.

CRATCHES, in the manege, a ſwelling on the paſtern, under the fetlock, and ſometimes under the hoof; for which reaſon it is diſtinguiſhed into the ſinew cratches, which affect the ſinew, and thoſe upon the cronet, called quitter-bones.

CRATER, in aſtronomy, a conſtellation of the ſouthern hemiſphere, conſiſting of 7 ſtars, according to Ptolemy's catalogue, of 8 in Tycho's, and 11 in the Britannic catalogue.

CRATER, in falconry, a line on which hawks are faſtened when reclaimed.

CRATEVA, in botany, a genus of the polyandria-monogynia claſs of plants, the flower of which conſiſts of four ovated petals, bent upwards towards the ſame ſide, and furniſhed with ſmall ungues of the length of the cup; the fruit is a fleſhy, globoſe, very large berry, with one cell, containing ſeveral roundiſh, emarginated, nidulatory ſeeds.

CRATICULA, a kind of gridiron, or chemical inſtrument, made of ſquare pieces of iron, of the thickneſs of one's finger, placed in acute angles, about half a finger's ſpace diſtant from one another. It ſerves in making fires to keep up the coals.

CRATO, a town of Alentejo, in Portugal, ſituated about ſeven miles ſouth of Portalegre: weſt long. 8°, and north lat. 38° 50′.

CRAVEN, in geography, a diviſion of the weſt riding of Yorkſhire, ſituated on the river Are.

CRAVEN, or CRAVENT, in our old cuſ-

toms,

toms, a term of reproach, uſed in trials by battle. The law was, that the victory ſhould be proclaimed, and the vanquiſhed acknowledge his fault, in the preſence of the people; or pronounce the word *Cravent* in the name of recreantice, or cowardice, &c. and preſently judgment to be given; and the recreant *amittere legem terræ, i. e.* become infamous.

CRAW, or CROP *of birds*, ingluvies. See the article INGLUVIES.

CRAX, in ornithology, a genus of birds, of the order of the gallinæ, the characters of which are, that they have four toes on each foot, and their head is ornamented with a creſt, or crown of feathers bending backwards. To this genus belong, 1. The black crax, or indian cock, with a black and white creſt. 2. The black indian cock, with a black creſt. 3. The ſpotted crax, or indian cock, with a black creſt.

CRAY, a diſtemper in hawks, proceeding from long feeding upon cold ſtale meat.

CRAY-FISH, the engliſh name of the larger long-tailed ſquillæ. See SQUILLA.

CRAYER, a ſmall kind of ſhip, mentioned in our old ſtatutes.

CRAYON, a name for all coloured ſtones, earths, or other minerals uſed in deſigning or painting in paſtel. Crayons may be made of any colour, and adapted for the faces of men, women, landſcapes, clouds, ſun-beams, buildings, and ſhadows, in the following manner. Take plaiſter of Paris, or alabaſter calcined, and of the colour of which you intend to make your crayons, a ſufficient quantity: grind them firſt aſunder, and then together, and with a little water make them into a paſte: then roll them with your hand upon the grinding ſtone into long pieces, and let them dry moderately in the air: when they are to be uſed, ſcrape them to a point like a common pencil.

CREAM, the fat part of milk that ſwims upon the ſurface. See MILK.

CREAM *of Tartar*, called alſo cryſtals of tartar, in pharmacy, a preparation of tartar perform'd in the following manner. Take any quantity of crude tartar, boil it in water, till the parts which are capable of ſolution be entirely diſſolved; filter the liquor whilſt hot through a flannel bag, into an earthen pan, and evaporate till a pellicle appears, then ſet it in a cold place, and ſuffer it to ſtand quietly two or three days: afterwards decant the fluid, and the cryſtals will be found adhering to the pan; ſcrape them off, and evaporate the fluid as before, and ſet it again to chryſtalliſe, and repeat the operation till all the chryſtals are formed. Cream of Tartar is a gentle purge. It attenuates and reſolves tough humours, and is good againſt obſtructions of the viſcera, and in cachectic complaints. It is alſo a good adjunct to chalybeate medicines.

CREAT, in the manege, an uſher to a riding-maſter; or, a gentlemen bred in the academy, with intent to make himſelf capable of teaching the art of riding the great horſe.

CREATION, the producing ſomething out of nothing, which ſtrictly and properly is the effect of the power of God alone, all other creations being only transformations, or change of ſhape. Creation (ſays the ſchoolmen) from no pre-exiſting ſubject, may be underſtood in different ſenſes. 1. That is ſaid to be created out of no pre-exiſting matter, in the production of which no matter is employed, as an angel. 2. Although matter may be employed in the production of a thing, it may be ſo produced as that both its matter and form are cauſed by the ſame agent at the ſame time. In this manner were the heavens and earth created in the opinion of thoſe who deny that God made the chaos. 3. Although matter may be the ſubject in producing a thing, yet that thing may not depend on matter either with reſpect to its future or preſent exiſtence. Such is the human ſoul, for although it is created in pre-exiſting matter, it is not created out of pre-exiſting matter, but of nothing, and therefore is no ways dependent on matter for exiſtence. See the article WORLD.

Epocha of the CREATION. See EPOCHA.

CREATION, in the romiſh church, the reproduction of the humanity of Jeſus Chriſt in the euchariſt, by the words of the conſecration.

CREDENTIALS, letters of recommendation, and power, eſpecially ſuch as are given to embaſſadors, or public miniſters, by the prince or ſtate that ſends them to foreign courts.

CREDIBILITY, a ſpecies or kind of evidence, leſs indeed than abſolute certainty or demonſtration, but greater than mere poſſibility: it is nearly allied to probability, and ſeems to be a mean between poſſibility and demonſtration. See the article EVIDENCE.

CREDIT, in commerce, a mutual truſt or loan of merchandiſe, or money, on the reputation of the probity and ſufficiency of a dealer.

Credit is either private or public.

Every conſiderable trader ought to have ſome eſtate, ſtock, or portion, of his own, ſufficient to carry on the traffic he is engaged in: they ſhould alſo keep their dealings within the extent of their capital, ſo that no diſappointment in their returns, may incapacitate them to ſupport their credit: yet traders of worth and judgment may ſometimes lie under the neceſſity of borrowing money for the carrying on their buſineſs to the beſt advantage; but then the borrower ought to be ſo juſt to his own reputation, and to his creditors, as to be well aſſured, that he has ſufficient effects within his power, to pay off his obligations in due time: but if the trader ſhould borrow money to the extent of his credit, and launch out into trade, ſo as to employ it with the ſame freedom as if it was his own proper ſtock, ſuch a way of management is very precarious, and may be attended with dangerous conſequences. Merchants ought never to purchaſe their goods for exportation upon long credit, with intent to diſcharge the debt by the return of the ſame goods, for this has an injurious influence upon trade ſeveral ways; and if any merchant has occaſion to make uſe of his credit it ſhould always be for the borrowing of money, but never for the buying of goods: nor is the large credit given to wholeſale traders a prudential or juſtifiable practice in trade.

The public credit of a nation is ſaid to run high, when the commodities of that nation find a ready vent, and are ſold at a good price, and when dealers may be ſafely truſted with them; alſo when lands and houſes find ready purchaſers; and money is to be borrowed at low intereſt: when people think it ſafe and advantageous to venture large ſtocks in trade, and when notes, mortgages, &c. will paſs for money.

CREDIT, was antiently a right which lords had over their vaſſals, conſiſting herein, that, during a certain time, they might oblige them to lend them money.

CREDITON, a market-town in Devonſhire, conſiderable for a good woollen manufactory: it is ſituated about 9 miles north-weſt of Exeter, in 3° 50′ weſt long. and 50° 50′ north lat.

CREDITOR, a perſon to whom any ſum of money is due, either by obligation, promiſe, or otherwiſe. See DEBT.

Creditors ſhall recover their debts of executors or adminiſtrators, that waſte or convert to their uſe the eſtate of the deceaſed. The laws of the twelve tables, which were the foundation of the roman juriſprudence, permitted the creditor to tear or cut his debtor to pieces, in caſe he proved inſolvent.

CREDITOR, in book-keeping. See the article BOOK-KEEPING.

CREED, a brief ſummary of the articles of a chriſtian's belief.

The moſt antient form of creeds is that which goes under the name of the apoſtolic creed; beſides this, there are ſeveral other antient forms, and ſcattered remains, of creeds to be met with in the primitive records of the church. The firſt is a form of apoſtolical doctrine, collected by Origen; the ſecond is the fragment of a creed, preſerved by Tertullian; the third remains of a creed, is in the works of Cyprian; the fourth, a creed compoſed by Gregory Thaumaturgus, for the uſe of his own church; the fifth, the creed of Lucian the martyr; the ſixth, the creed of the apoſtolical conſtitutions. Beſides theſe ſcattered remains of the antient creeds, there are extant ſome perfect forms, as thoſe of Jeruſalem, Cæſarea, Antioch, &c.

The moſt univerſal creeds are the apoſtolical, the athanaſian, and the nicene creeds.

CREEK, the part of a haven where any thing is landed from the ſea.

It is defined by ſome to be a ſhore, or bank, on which the water beats, running in a ſmall channel from any part of the ſea.

CREEPER, in ornithology, a name given to ſeveral ſpecies of iſpida, called in engliſh the ox-eye. See the article ISPIDA.

The black, white, and red indian creeper is a curious little bird, figured of its natural bigneſs in plate XLV. fig. 2. Its upper ſide is of a deep black, ſpotted with ſcarlet; the whole under part of the body is white; only the legs, feet, and claws are black.

CREEPER, at ſea, a ſort of grapnel, but without flooks, uſed for recovering things that may be loſt over-board. See plate LVIII. fig. 5.

CRENGLES, among ſeamen, ſmall ropes ſpliced into the bolt-ropes of the ſails of the main-maſt, and fore-maſt, into which

Fig. 1. IMPROVED CRANE.

N.° 1.

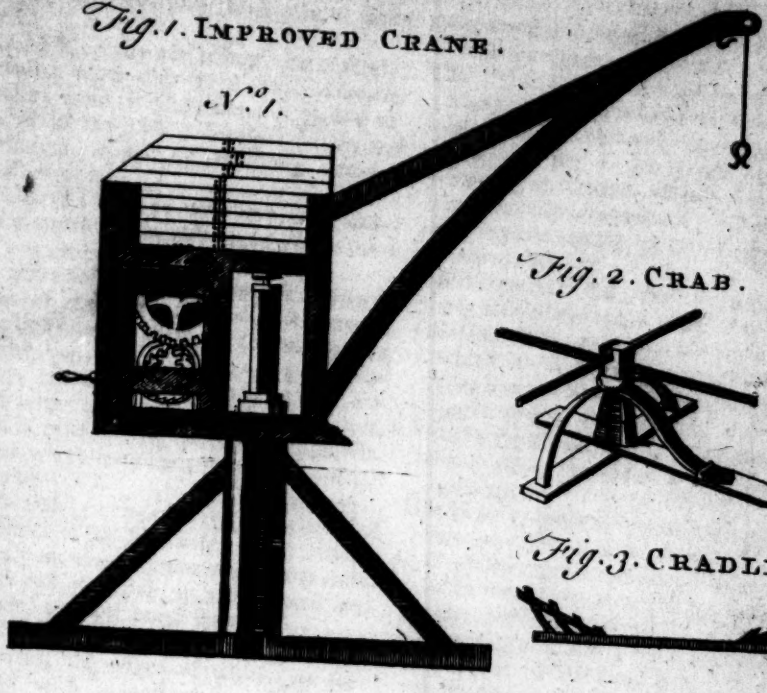


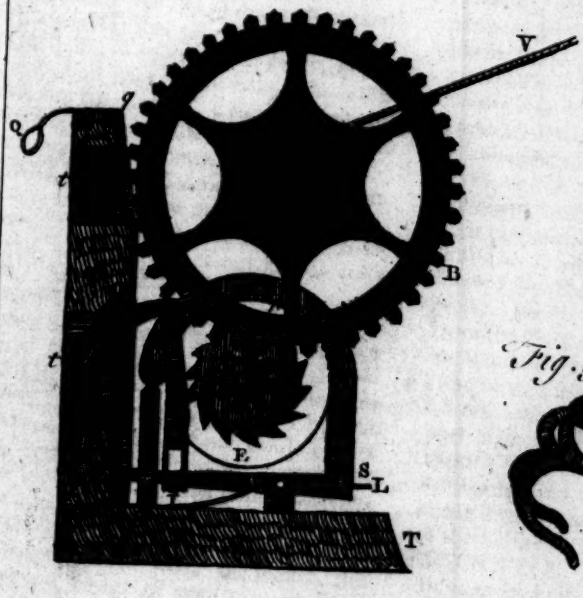
Fig. 2. CRAB.

Fig. 3. CRADLE.



Fig. 4.
CHIMNEY-CRANE.

N.° 2.



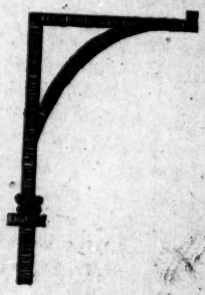


Fig. 5. CREEPER.



Fig. 6. CROTCHES.

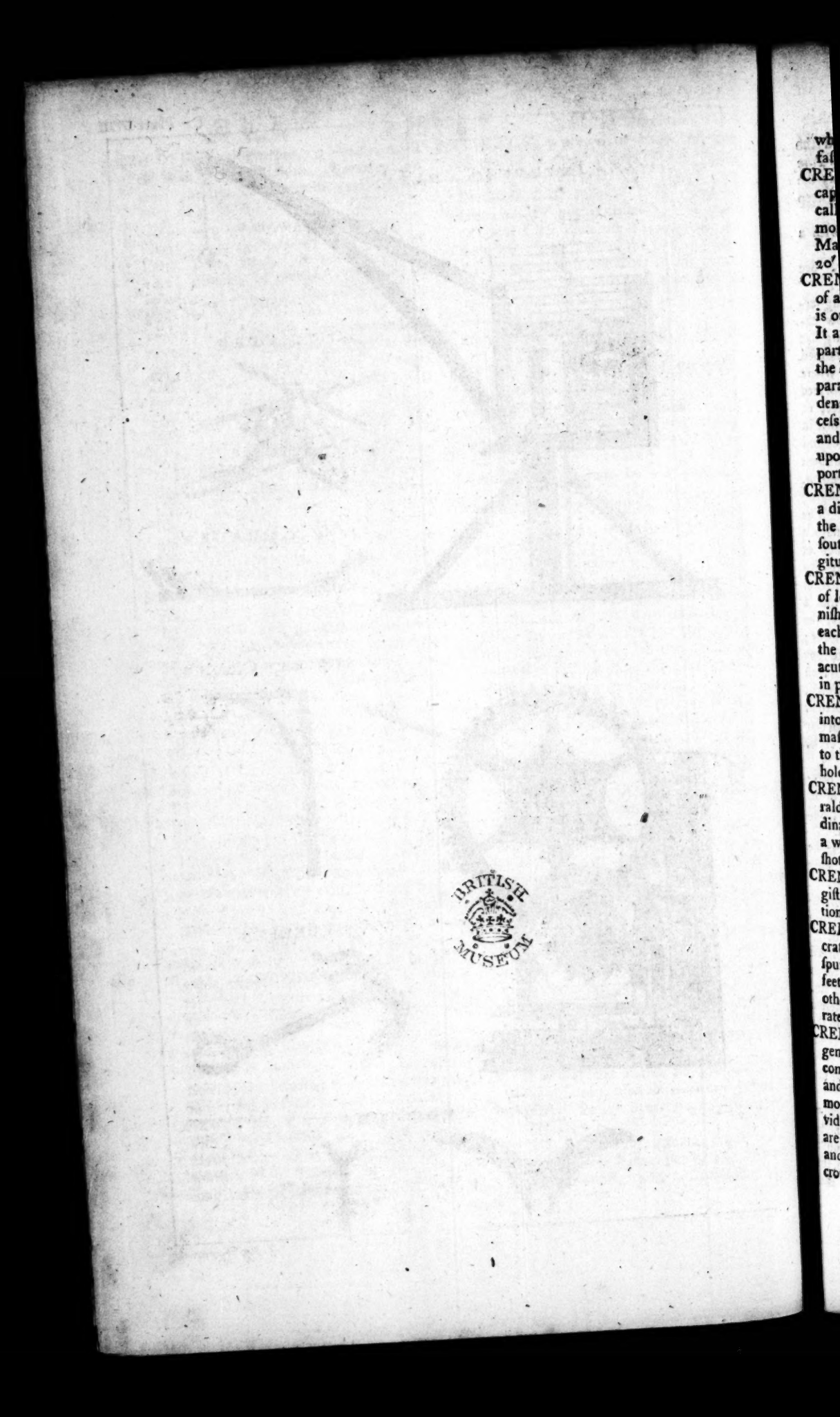


N.° 1.



N.° 2.

T. Jeffreys sculp.


BRITISH MUSEUM

which the bowling bridles are made faſt.

CREMA, a city and biſhop's ſee of Italy, capital of a diſtrict of the Milaneſe, called from it Cremaſco: it ſtands almoſt in the middle between Milan and Mantua, in 10° 15′ eaſt long. and 45° 20′ north lat.

CREMASTER, in anatomy, the name of a muſcle of the teſticle, of which there is one on each ſide.

It ariſes fleſhy from the loweſt and fore-part of the os ilium, and upper part of the ligamentum pubis: its fibres running parallel with thoſe of the oblique aſcendens, and almoſt encompaſſing the proceſs of the peritonæum, deſcends with it, and is inſerted into the tunica vaginalis, upon which it ſpreads in ſeveral diſtinct portions.

CREMONA, a city of Italy, and capital of a diſtrict of the Milaneſe, called from it the Cremoneſe, is ſituated forty-five miles ſouth-eaſt of Milan, in 10° 30′ eaſt longitude, and 45° north latitude.

CRENATED, among botaniſts, is ſaid of leaves, the edges of which are furniſhed with indentings, contiguous to each other, and neither inclining toward the point nor baſe. Of theſe ſome are acute, others obtuſe, &c. as repreſented in plate LIII. fig. 5.

CRENCLES, in a ſhip, ſmall ropes, ſpliced into the bolt-ropes of the ſails of the main-maſt and fore-maſt. They are faſtened to the bow line-bridles; and are alſo to hold by, when a bonnet is ſhaken off.

CRENELLE', or IMBATTLED, in heraldry, is uſed when any honourable ordinary is drawn, like the battlements on a wall to defend men from the enemies ſhot. See plate LXII. fig. 4.

CRENOPHYLAX, in antiquity, a magiſtrate at Athens, who had the inſpection of fountains.

CREPANCE, in the manege, a chop, or cratch, in a horſe's leg, given by the ſpunges of the ſhoes of one of the hinder feet, croſſing and ſtriking againſt the other hinder foot. This cratch degenerates into an ulcer.

CREPIS, in botany, a genus of the ſyngeneſia-polygamia claſs of plants, the compound flower of which is uniform and imbricated; and the proper ones monopetalous, linear, truncated, and divided into five indentures; the ſtamina are five very ſhort capillary filaments; and the ſeed is oblong, ſolitary, and crowned with long down, being incloſed in a roundiſh cup, that ſerves inſtead of a pericarpium.

CREPUNDIA, in antiquity, a term uſed to expreſs ſuch things as were expoſed along with children, as rings, jewels, &c. called by the greeks γνωρίσματα, ſerving as tokens whereby they afterwards might be known; or as helps to defray the charges of breeding and educating them.

CREPUSCULUM, the TWILIGHT, in aſtronomy and optics. See TWILIGHT.

CRESCENT, *creſcens*, the new moon, which, as it begins to recede from the ſun, ſhews a little rim of light, terminating in points, called horns, that are ſtill increaſing, till it is in oppoſition to the ſun, at which time it is full moon, or quite round.

CRESCENT, in heraldry, a bearing in form of a new moon. See plate LVII. fig. 4. It is uſed either as an honourable bearing, or as the difference to diſtinguiſh between elder and younger families; this being generally aſſigned to the ſecond ſon, and thoſe that deſcend from him. The figure of the creſcent is the turkiſh ſymbol, with its points looking towards the top of the chief, which is its moſt ordinary repreſentation, called creſcent montant. Creſcents are ſaid to be adoſſed, when their backs are turned towards each other; a creſcent is ſaid to be inverted, when its points look towards the bottom; turned creſcents have their points looking to the dexter-ſide of the ſhield; cornuted creſcents to the ſiniſter ſide, and affronted creſcents, contrary to the adoſſed, have their points turned to each other.

CRESCENT is alſo an order of knights, inſtituted by Renatus of Anjou, king of Sicily, about the year 1448, ſo called, from the badge of this order, which was an enamelled creſcent of gold.

CRESCENT, a term among farriers. Thus a horſe is ſaid to have creſcents when that part of the coffin bone which is moſt advanced falls down and preſſes the ſole outwards, and the middle of her hoof above ſhrinks, and becomes flat, by reaſon of the hollowneſs beneath it.

CRESCENTIA, in botany, a genus of the didynamia-angioſpermia claſs of plants, whoſe corolla conſiſts of a ſingle petal, gibbous and unequal; the tube is alſo gibbous; the limb erect, and divided into five ſegments. The fruit is an oval, hard berry, containing a ſingle cell: the ſeeds are numerous, ſubcordated, nidulated, and containing two cells.

CRESS,

CRESS, or CRESSES, in botany, the engliſh name of the lepidium. See the article LEPIDIUM.

Indian CRESS, the engliſh name of the cardamindum, or tropæolum of botaniſts. See the article TROPÆOLUM.

Sciatica-CRESS, the ſame with cardamine. See the article CARDAMINE.

Water, or *Winter*-CRESS, the ſame with the ſiſymbrium. See SISYMBRIUM.

CRESSY, a town of Picardy in France, about forty-four miles ſouth of Calais, and twenty-ſeven north-weſt of Abbeville, remarkable on account of the victory obtained there over the French, by Edward III. of England, in the year 1346: eaſt long. 2°, and north lat. 50° 20′.

CREST, in armoury, the top part of the armour for the head, mounting over the helmet, in manner of a comb, or tuſt of a cock, deriving its name from *criſta*, a cock's comb.

The creſt was for the moſt part made of feathers, or the hair of horſes tails or mains. The ſoldiers took great pride in adorning them. In moſt of the old monuments we find the creſt repreſented, not much unlike thoſe on the tops of our modern head-pieces: but whatever the common ſoldiers had, thoſe of the officers were uſually wrought in gold or ſilver, and the plumes of a larger ſize, quite acroſs the helmet; and ſome wore two, or three, or four together of theſe plumes.

CREST, in heraldry, the uppermoſt part of an armoury, or that part of the caſk or helmet next to the mantle. Guillim ſays, the creſt, or cognizance, claims the higheſt place, being ſeated on the moſt eminent part of the helmet; yet ſo as to admit of an interpoſition of ſome eſcrol, wreathe, chapeau, crown, *&c.*

The creſt is eſteemed a greater mark of nobility, than the armoury; being borne at tournaments, to which none were admitted till ſuch time as they had given proof of their nobility: ſometimes it ſerves to diſtinguiſh the ſeveral branches of a family; and it has ſerved, on occaſion, as a diſtinguiſhing badge of factions: ſometimes the creſt is taken for the device; but more uſually is formed of ſome piece of the arms. Families that exchange arms do not change their creſt.

CREST, among carvers, an imagery, or carved work, to adorn the head, or top of any thing, like our modern corniche.

CREST-FALLEN, a fault of an horſe, when the upper part of his neck, called the creſt, hangs to one ſide: this they cure by placing it upright, clipping away the ſpare ſkin, and applying plaſters to keep it in a proper poſition.

CRESTED, ſomething furniſhed with a creſt. See the article CREST.

CRETA, CHALK, in natural hiſtory. See the article CHALK.

CREUX, a french term uſed among artiſts, and literally ſignifies a hollow cavity, or pit, out of which ſomething has been ſcooped or dug: whence it is uſed to ſignify that kind of ſculpture, where the lines and figures are cut and formed within the face or plan of the plate, or matter engraved; and thus it ſtands in oppoſition to relievo, where the lines and figures are emboſſed, and riſe prominent above the face of the matter engraved on.

CREW, the company of ſailors belonging to a ſhip, boat, or other veſſel. The ſailors that are to work and manage a ſhip, are regulated by the number of laſts it may carry, each laſt making two tun. The crew of a Dutch ſhip, from forty to fifty laſts, is ſeven ſailors and a ſwabber; from fifty to ſixty laſts, the crew conſiſts of eight men and a ſwabber; and thus encreaſes at the rate of one man every ten laſts. Engliſh and french crews are uſually ſtronger than dutch, but always in about the ſame proportion. There are in a ſhip ſeveral particular crews, or gangs, as the gun-room crew, the carpenter's crew, *&c.*

CREX, in ornithology, a ſpecies of ortygometra, known in different parts of the kingdom, by the names darker-hen, and corn-crake. See ORTYGOMETRA.

From its note *crex*, *crex*, the name crex, as well as corn-crake, are evidently derived: it is frequent in corn-fields.

CRIANCE, or CREANCE, among ſportſmen, a fine packthread faſtened to a hawk's breaſt, when ſhe is firſt lured.

CRIB, a frame of wood wherein moiſt things, particularly ſalt, as it is taken out of the boiling-pan, are put to drain.

CRIBBAGE, a game at cards, wherein no cards are to be thrown out, and the ſet to make ſixty-one; and as it is an advantage to deal, by reaſon of the crib it is proper to lift for it, and he that has the leaſt card deals.

There are only two players at this game wherein the cards are dealt out one by one, the firſt to the dealer's antagoniſt and the next to himſelf; and ſo on, till each

each have five; the reſt being ſet down in view on the table.

This done, the dealer lays down the two beſt cards he can for his crib; and his antagoniſt lays down the other two, the very worſt in his hand, by reaſon the crib is the property of the dealer. They next turn up a card from the parcel left after dealing, and then count their game thus: any fifteen upon the cards is two; as king and five, ten and five, nine and ſix, eight and ſeven, &c. A pair is alſo two; a pair royal, or three aces, kings, &c. ſix; a double pair royal, or four aces, &c. twelve. Sequences of three cards, as, four, five, and ſix, is three; ſequences of four, four; five, five, &c. and the ſame holds of a fluſh. Knave noddy, or of the ſuit turned up, is one in hand, and two to the dealer. If, after the cards for the crib are laid out, you have in your hand a nine and two ſixes, that makes ſix; becauſe there is two fifteens, and a pair: and if a ſix chance to be turned up, then you have twelve in your hand, *viz.* the pair royal, and three fifteens. Theſe are to be marked with pegs, counters, or otherwiſe. If you happen to have ſequences, as of four, five, and ſix in your hand, and ſix be the turned up card, they are counted thus: firſt, the ſequences in your hand make two; and the ſequences of the four and five in your hand, added to the ſix turned up, make other two: there is likewiſe two fifteens, counting firſt with the ſix in your hand, and then with that turned up.

This done, the antagoniſt to the dealer plays firſt, ſuppoſe a ſix; and if the dealer can make it fifteen, by playing nine, he gains two; otherwiſe they play on, and he that reaches thirty-one exactly, or comes neareſt under it, gains one. Here too, in playing of the cards, you may make pairs, pairs-royal, fluſhes, &c. which are all counted as above.

As to the crib, it is the dealer's, who may make as many as he can out of them, together with the card turned up; counting as above: if he can make none, he is ſaid to be bilked.

Thus they play and deal by turns, till the game of ſixty-one is up; and if either of the gameſters reach this before the other is forty-five, this laſt is ſaid to be lurkt, and the other gains a double game.

CRIBRATION, in pharmacy, the paſſing any ſubſtance through a ſieve, or ſearce, in order to ſeparate the finer particles from the groſſer, whether the body be dry and reduced to powder, or moiſt as the pulps of ſeeds, fruits, or roots.

CRIBROSUM OS, in anatomy, called alſo os ethmoides, and os cribriforme, a bone ſituated internally in the fore part of the baſis of the ſkull. The uſes of it are to be a principal part of the organ of ſmelling, and to give a very great extent to the pituitary membrane in a ſmall compaſs.

CRIBRUM BENEDICTUM, among antient phyſicians, an imaginary membrane of the kidneys, by which they pretended the ſerum was percolated or ſtrained, and the good blood left behind.

CRICETUS, in zoology, an animal of the mouſe or rat-kind, with an elongated tail, and variegated with reddiſh brown, black, and grey. See the article MUS.

CRICK, among farriers, is when a horſe cannot turn his neck any manner of way, but holds it fore right, inſomuch that he cannot take his meat from the ground without great pain. The cure is to thruſt a ſharp hot iron through the fleſh of the neck in ſeveral places, at three inches diſtance, and rowel all of them, with horſe-hair, flax, or hemp, anointing the rowels with hog's greeſe.

CRICKET, the name of an exerciſe or game with bats and balls. The laws of this game, as ſettled by the cricket-club in 1744, and played at the artillery-ground, London, are as follow.

The pitching the firſt wicket is to be determined by the caſt of a piece of money. When the firſt wicket is pitched, and the popping-creaſe cut, which muſt be exactly three feet ten inches from the wicket, the other wicket is to be pitched directly oppoſite at twenty-two yards diſtance, and the other popping-creaſe cut three feet ten inches before it. The bowling-creaſes muſt be cut in a direct line from each ſtump. The ſtumps muſt be twenty-two inches long, and the bail ſix inches. The ball muſt weigh between five and ſix ounces. When the wickets are both pitched, and all the creaſes cut, the party that wins the toſs up may order which ſide ſhall go in firſt, at his option.

The laws for the bowlers. Four balls and over. The bowler muſt deliver the ball with one foot behind the creaſe, even with the wicket, and when he has bowled one ball, or more, ſhall bowl to the number four before he changes wickets; and he ſhall change but once in the ſame innings.

innings. He may order the player that is in at his wicket to ſtand on which ſide of it he pleaſes at a reaſonable diſtance. If he delivers the ball with his hinder foot over the bowling-creaſe, the umpire ſhall call no ball, though ſhe be ſtruck, or the player is bowled out, which he ſhall do without being aſked, and no perſon ſhall have any right to aſk him.

Laws for the ſtrikers, or thoſe that are in. If the wicket is bowled down, it is out. If he ſtrikes or treads down, or he falls himſelf upon the wicket in ſtriking, but not in over-running, it is out. A ſtroke or nip over or under his bat, or upon his hands, but not arms, if the ball be held before ſhe touches ground, though ſhe be hugged to the body, it is out. If in ſtriking, both his feet are over the popping-creaſe, and his wicket put down, except his bat is down within, it is out. If he runs out of his ground to hinder a catch, it is out. If a ball is nipped up, and he ſtrikes her again wilfully before ſhe come to the wicket, it is out. If the players have croſſed each other, he that runs for the wicket that is put down, is out; if they are not croſſed, he that returns is out. If in running a notch, the wicket is ſtruck down by a throw before his foot, hand, or bat is over the popping-creaſe, or a ſtump hit by the ball, though the bail was down, it is out. But if the bail is down before, he that catches the ball muſt ſtrike a ſtump out of the ground-ball in hand, then it is out. If the ſtriker touches or takes up the ball before ſhe is lain quite ſtill, unleſs aſked by the bowler or wicket-keeper, it is out.

Bat, foot, or hand over the creaſe. When the ball has been in hand by one of the keepers or ſtoppers, and the player has been at home, he may go where he pleaſes till the next ball is bowled. If either of the ſtrikers is croſſed in his running ground deſignedly, which deſign muſt be determined by the umpires. *N. B.* The umpires may order that notch to be ſcored. When the ball is hit up, either of the ſtrikers may hinder the catch in his running ground, or if ſhe is hit directly acroſs the wickets, the other player may place his body any where within the ſwing of the bat, ſo as to hinder the bowler from catching her: but, he muſt neither ſtrike at her, nor touch her with his hands. If a ſtriker nips a ball up juſt before him, he may fall before his wicket, or pop down his bat before ſhe comes to it, to ſave it. The bail hanging on one ſtump, though the bail hit the wicket, it is not out.

Laws for the wicket-keepers. The wicket-keepers ſhall ſtand at a reaſonable diſtance behind the wicket, and ſhall not move till the ball is out of the bowler's hand, and ſhall not by any noiſe incommode the ſtriker; and if his hands, knees, foot, or head be over, or before the wicket, though the ball hit it, it ſhall not be out.

Laws for the umpires. To allow two minutes for each man to come in when one is out, and ten minutes between each hand. To mark the ball that it may not be changed. They are ſole judges of all outs and ins, of all fair or unfair play, of all frivolous delays, of all hurts, whether real or pretended, and are diſcretionally to allow what time they think proper before the game goes on again. In caſe of a real hurt to a ſtriker, they are to allow another to remain, and the perſon hurt to come in again; but are not to allow a freſh man to play on either ſide on any account. They are ſole judges of all hindrances, croſſing the players in running, and ſtanding unfair to ſtrike; and, in caſe of hindrance, may order a notch to be ſcored. They are not to order any man out, unleſs appealed to by one of the players. Thoſe laws are to the umpires jointly.

Each umpire is the ſole judge of all nips and catches, ins and outs, good or bad runs, at his own wicket, and his determination ſhall be abſolute, and he ſhall not be changed for another umpire without the conſent of both ſides. When the four balls are bowled, he is to call over. Theſe laws are ſeparately.

When both umpires call play three times, it is at the peril of giving the game from them that refuſe to play.

CRICKET, in zoology, the engliſh name of the gryllus. See GRYLLUS.

Mole-CRICKET, the ſame with the gryllo-talpa. See the article GRYLLO-TALPA.

CRICKLADE, a borough-town of Wiltſhire, ſituated on the river Iſis, about twenty-ſix miles ſouth-weſt of Oxford, weſt longitude 1° 55′, and north latitude 51° 35′.

It ſends two members to parliament.

CRICOARYTANOIDÆUS, in anatomy, a name given to two muſcles of the larynx, called the cricoarytænoides poſticum, and the lateral cricoarytænoides. They ſerve to dilate the glottis. See the article LARYNX.

CRICOIDES, in anatomy, a cartilage of the larynx, called alſo the annular cartilage. It occupies the loweſt part by way of baſe to the reſt of the cartilages; and to the lower part of it the aſpera arteria adheres.

CRICOTHYROIDÆUS, in anatomy, one of the five proper muſcles of the larynx, which ariſe and terminate in it. It ſerves occaſionally either to dilate, or conſtringe the glottis.

CRIM, or CRIM-TARTARY, a peninſula in the black ſea, between 33° and 37° eaſt long. and between 44° and 46° north lat. It is joined to Little Tartary by a narrow iſthmus.

The prince of this country, called Cham, or Ham, is ſubject to the Turks; being obliged to furniſh 30,000 men, whenever the grand ſignior takes the field.

CRIME, *crimen*, the tranſgreſſion of a law, either natural or divine, civil or eccleſiaſtic.

Civilians diſtinguiſh between crimen and delictum. By the firſt, they mean capital offences, injurious to the whole community, as murder, perjury, &c. the proſecution of which was permitted to all perſons, though no ways immediately intereſted. By the latter, they underſtand private offences committed againſt individuals, as theft, &c. By the laws, no body was allowed to proſecute in theſe, except thoſe intereſted.

With us, crimes are diſtinguiſhed into capital, as treaſon, murder, robbery, &c. and common, as perjuries, &c.

Again, ſome crimes are cognizable by the king's judges, as the above-mentioned; and others are only cognizable in the ſpiritual courts, as ſimple fornication.

Quaſi CRIME. See QUASI CRIME.

CRIMNOIDES, or CRIMOIDES, among phyſicians, a term ſometimes uſed for the ſediment of urine, reſembling bran.

CRIMSON, one of the ſeven red colours of the dyers.

To dye a lively crimſon: Firſt wet the goods well, and for every pound of ſtuff to make the ſuds, uſe two ounces and a half of tempered aqua fortis, and three ounces and half of tartar, an ounce and half of cochineal, and eight ounces of alum. Boil the goods with all theſe for half an hour; let them cool, and rinſe them out. To finiſh the dye, boil four ounces of cochineal, three ounces of ſtarch, three ounces of white-wine tartar, and half an ounce of white arſenic together for a quarter of an hour, then put in the goods and let them boil for above half an hour, or till they have taken the dye well and equally.

CRINONES, among phyſicians, ſmall worms that breed in the ſkin, called alſo dracunculi. See DRACUNCULI.

They moſtly infeſt the muſcular parts, as the back, ſhoulders, legs, and thighs. They occaſion a troubleſome itching, and are to be deſtroyed with a mercurial lotion.

CRINUM, in botany, a genus of the hexandria-monogynia claſs of plants, the flower of which is infundibuliform and monopetalous: the fruit is a ſubovated capſule, with three cells, containing ſeveral ſeeds.

CRISIS, in medicine, is uſed in different ſenſes, both by the antient and modern phyſicians. With ſome it means frequently no more than the excretion of any noxious ſubſtance from the body. Others take the word for a ſecretion of the noxious humours made in a fever. Others uſe it for the critical motion itſelf; and Galen defines a criſis in fevers, a ſudden and inſtantaneous change, either for the better or the worſe, productive of recovery or death. The doctrine of criſes is very obſcure; however the following are reckoned the principal ſymptoms of an approaching criſis, a ſudden ſtupor, drowſineſs, waking, delirium, anxiety, dyſpœna, grief, redneſs, titillation, nauſea, heat, thirſt, &c. after digeſtion, and about the critical time; and the ſymptoms and effects of a preſent criſis are after the preceding ones, a vomiting, looſeneſs, thick ſediment in the urine, bleeding at the noſe, hæmorrhoids, ſweat, abſceſſes, puſtules, tumours, buboes, &c.

CRISP LEAF, among botaniſts, is one folded over and over, at the edges, which are always ſerrated, dentated, or lacerated. It is otherwiſe called curled. See plate LXIV. fig. 3.

CRISTÆ, in ſurgery, a term for certain excreſcences about the anus and pudenda. See the article CONDYLOMA.

CRISTA GALLI, in anatomy, a proceſs of the os ethmoides, making the upper part of the ſeptum narium. It takes its name from the ſuppoſed reſemblance to the comb of a cock. See CRIBROSUM OS.

CRITERIUM, a ſtandard by which propoſitions and opinions are compared, in order to diſcover their truth or falſhood.

CRITHE, in ſurgery, commonly called the ſtye, is a tubercle that grows in dif-

ferent parts of the eyelids. When it is ſmall it comes only on the edge of the eyelids, or very near it, between the cilia; but when it is large it ſpreads towards the middle of the lid. The cure of this diſeaſe muſt be varied according as the crithe is attended with an inflammation, or is hardened and concreted.

For a more particular account of the nature, and the treatment proper in the cure of this diſorder, ſee the article STYE.

CRITHMUM, SAMPHIRE, in botany, a genus of the pentandria-digynia claſs of plants, the univerſal flower of which is uniform; the proper one conſiſts of five ovated, inflected, and nearly equal petals: there is no pericarpium: the fruit is oval, compreſſed, and ſeparable into two parts: there are two elliptical compreſſo-plane ſeeds, ſtriated on one ſide. Samphire is more uſed as a pickle, than for any medicinal purpoſes. However, it is ſuppoſed to ſtrengthen the ſtomach, provoke urine, and open obſtructions of the bowels.

CRITHOMANCY, a kind of divination performed by conſidering the dough or matter of cakes, offered in ſacrifice, and the meal ſtrewed over the victim to be killed.

CRITICAL DAYS and SYMPTOMS, among phyſicians, are certain days and ſymptoms in the courſe of acute diſeaſes, which indicate the patient's ſtate, and determine him either to recover or grow worſe. A careful obſervation of theſe days is of the greateſt uſe towards the cure of diſeaſes, leſt miſchief be done by unſeaſonable aſſiſtance from art, as when a phyſician endeavours to expel that which is not prepared to be evacuated, or elſe hinders the evacuation of ſuch humours, as, being ſubdued and concocted, endeavour to eſcape by ſome convenient outlet. According as the violence of the diſeaſe is more ſwift or ſlow, the critical days will be more or leſs diſtant from each other: thus in fevers which do not exceed the ſpace of three weeks, the quaternary or ſeptennary days are critical; and beſides theſe, there are in the two firſt weeks many more incidentally critical days, as the third, fifth, ſixth, &c. But if an acute diſeaſe extends itſelf beyond three weeks, then the quaternary days no more take place as critical, but only the ſeptennary days are ſo, though the efficacy of theſe laſt is likewiſe aboliſhed after the fortieth day. See the article CRISIS.

CRITICISM, the art of judging with propriety concerning any diſcourſe or writing. Though the uſe of the word is ordinarily reſtrained to literary criticiſm, we may diſtinguiſh divers other branches of this art, as, 1. Philoſophical criticiſm, the art of judging of the hypotheſes and opinions of philoſophers. 2. Theological criticiſm, the art of judging of explications of doctrines of faith. 3. Political criticiſm, the art of judging of the means of governing, acquiring, and preſerving ſtates. 4. Grammatical criticiſm, the art of interpreting the words of an author, &c. Lord Bacon divides criticiſm, firſt, as it regards the exact correcting and publiſhing of approved authors, by which the honour of ſuch authors is preſerved, and the neceſſary aſſiſtance afforded to the reader: yet the miſapplied labours and induſtry of ſome have in this reſpect proved highly prejudicial to learning; for many critics have a way, when they fall upon any thing they do not underſtand, of immediately ſuppoſing a fault in the copy, and hence it happens that the moſt corrected copies are often the leaſt corrected. 2. As it reſpects the explanation and illuſtration of authors by notes, comments, collections, &c. But here an ill cuſtom has prevailed, of ſkipping over the obſcure paſſages, and expatiating upon ſuch as are ſufficiently clear: as if the deſign was not ſo much to illuſtrate the author, as to take all occaſions of ſhewing their own learning and reading. It were therefore to be wiſhed, ſays the noble author, that every original writer who treats an obſcure ſubject, would add his own explanation to his own work, and thus prevent any wrong interpretation by the notes of others. 3. There belongs to criticiſm a certain conciſe judgment or cenſure of the authors publiſhed, and a compariſon of them with other writers, who have treated the ſame ſubject. In ſhort, the art of criticiſm, though reckoned by ſome as a diſtinct part of philoſophy, is in truth nothing elſe than a more correct and accurate knowledge in the other parts of it; and a readineſs to apply that knowledge upon all occaſions, in order to judge well of what relates to theſe ſubjects, to explain what is obſcure in authors, to ſupply what is defective, and amend what is erroneous in manuſcripts or antient copies, to correct the miſtakes of authors and editors in the ſenſe or the words, to reconcile the controverſies of the learned, and by theſe means to ſpread a juſter knowledge of the beautiful paſſages and ſolid reaſoning of authors, among

among the inquiſitive part of mankind.

CRIZZELING is ſaid of glaſs, which, by reaſon of too great a proportion of nitre, tartar, or borax, is ſcabrous or rough on the ſurface.

CROATIA, a frontier province of Germany, bounded by Sclavonia on the north and eaſt, by Boſnia on the ſouth, and by Carniola on the weſt.

It is ſubject to the houſe of Auſtria.

CROCCEUS, or HOAMEO, a large river of China, which, after a courſe of two thouſand miles, falls into the bay of Nankin: it is ſometimes called the Yellow river, on account of the ſlime of this colour, with which its waters are tinged.

CROCHES, among hunters, the little buds growing about the tops of a deer or hart's horns.

CROCI, among botaniſts, the ſame with antheræ. See the article ANTHERÆ.

CROCIA, the ſame with croſier. See the article CROSIER.

CROCINUM, among phyſicians, denotes the oil of ſaffron, ſaid to be of a heating quality, and to procure ſleep; whence it is frequently uſed in phrenſies: it is alſo a ſuppurative, and deterges ulcers.

CROCODES, an appellation given to paſtils or troches, whereof crocus, or ſaffron, is the principal ingredient.

CROCODILE, *crocodilus*, in zoology, a ſpecies of lizard, with a two-edged tail and triangular feet, the fore ones having five, and the hinder only four toes. See the article LIZARD.

This animal is the largeſt of the lizard-kind, growing to twenty-five feet in length, and about the thickneſs of a man's body. It is a native of the torrid zone, frequenting ſalt-water rivers, where it lies concealed among the reeds or ruſhes, till it finds an opportunity to ſeize men or other animals, which it drags into the water, always taking this method of drowning them firſt, that it may afterwards ſwallow them without reſiſtance: its general food, however, is fiſh. The Africans and Indians eat its fleſh, which is white, and of a kind of perfumed flavour.

CROCUS, SAFFRON, in botany, a genus of the triandria-monogynia claſs of plants, the flower of which conſiſts of one petal, divided into ſix oval, oblong, and equal ſegments; and its fruit is a trilocular capſule, conſiſting of three valves, and containing a number of roundiſh ſeeds. See plate LIV. fig. 8.

For the culture of ſaffron, its different preparations, medicidal virtues and other uſes, ſee the article SAFFRON.

CROCUS, in chemiſtry, denotes any metal calcined to a red or deep yellow colour: thus we meet with crocus martis aperiens & aſtringens, or the aperient and aſtringent crocuſes of iron; alſo with the crocus veneris, or copper calcined to ſuch a reddiſh powder.

The aperient crocus of iron is thus made: expoſe a quantity of iron filings to the open air, in the ſpring, till they are perfectly converted into a reddiſh duſt; or, mix equal quantities of iron filings and ſulphur into a paſte, and calcine this over the fire till the ſulphur is burnt away; the remaining red powder is called crocus martis aperiens cum ſulphure. Both theſe are recommended in obſtructions, and may be given in ten grains for a doſe; but the firſt is eſteemed the beſt.

The aſtringent crocus of iron is made by expoſing iron filings to air, and ſprinkling them at times with vinegar, till they are almoſt converted into ruſt; after which they are expoſed to a ſtrong reverberatory fire, till they become of a deep purple colour. This powder is found a good medicine in hæmorrhages and fluxes, the doſe being from ten to thirty grains; and the beſt way of adminiſtring it is in a bolus or pills.

The crocus of copper is otherwiſe called æs uſtum. See the article ÆS.

CROCUS METALLORUM, an emetic preparation of antimony and nitre, thus made: take an equal quantity of each, powder them ſeparately, then mixing them well together, throw the mixture by degrees into a red hot crucible, where it is to remain till melted thoroughly: this, after being ſeparated from the ſcoriæ, is to be kept for uſe. By boiling this crude crocus, firſt reduced to a fine powder, in water, and afterwards waſhing it with more hot water, till it comes off inſipid, is obtained the waſhed crocus of antimony, for the virtues of which ſee the article ANTIMONY.

CROFT, a little cloſe adjoining to a dwelling houſe, and encloſed for paſture or arable land, or any other particular uſe.

CROISADE, CRUSADE, or CRUZADO, a name given to the expeditions of the chriſtians againſt the infidels, for the conqueſt of Paleſtine; ſo called becauſe thoſe who engaged in the undertaking wore a croſs on their cloaths, and bore one on their ſtandard.

This expedition was alſo called the holy

war, to which people flocked in great numbers out of pure devotion, the pope's bulls and the preaching of the prieſts of thoſe days making it a point of conſcience. The ſeveral nations engaged in the holy war were diſtinguiſhed by the different colours of their croſſes: the Engliſh wore white, the French red, the Flemiſh green, the Germans black, and the Italians yellow. From this enterprize ſeveral orders of knighthood took their riſe. They reckon eight croiſades for the conqueſt of the holy land: the firſt begun in the year 1095, at the ſolicitation of the greek emperor and the patriarch of Jeruſalem.

CROISES, or CROIZES, in engliſh antiquity, pilgrims bound for the holy land, or ſuch as had been there; ſo called from a badge they wore in imitation of a croſs. The knights of St. John of Jeruſalem, created for the defence and protection of pilgrims, were particularly called croiſes: and ſo were all thoſe of the engliſh nobility, gentry, &c. who, in the reigns of Henry II. Richard I. Henry III. and Edward I. were *cruce ſignati*, that is, devoted for the recovery of the holy land.

CROISIERS, *crucigeri*, CROSS-BEARERS, a religious order founded in honour of the invention or diſcovery of the croſs by the empreſs Helena.

They are diſperſed in ſeveral parts of Europe, particularly in the Low Countries, France, and Bohemia, thoſe in Italy being at preſent ſuppreſſed. Theſe religious follow the rule of St. Auguſtine. They had in England the name of crouched friers.

CROISSANTE, in heraldry, is ſaid of a croſs, the ends of which are faſhioned like a creſcent or half moon. See CROSS.

CROMARTY, or CROMARTIE, the capital of the ſhire of Cromartie, in Scotland, with an excellent and ſafe harbour capable of containing the greateſt fleets: weſt long. 3° 40′, and north lat. 57° 54′.

CRONENBURG, a fortreſs of Denmark, ſituated in the iſland of Zealand, at the entrance of the Sound, where the Danes take toll of ſhips bound for the Baltic: eaſt longit. 12° 5′, and north lat. 56°.

CRONSLOT, or CROWN-CASTLE, a caſtle and harbour in a little iſland of the ſame name, at the mouth of the river Neva, and entrance of the gulph of Finland, in Ruſſia, about twelve miles weſt of Peterſburgh: eaſt longitude 30°, and north latude 60°. Here is a ſtation for the ruſſian men of war, and a yard for building and refitting them.

CRONSTAT, a town of Tranſilvania, ſituated near the frontiers of Moldavia, about fifty miles north-eaſt of Hermanſtat, and ſubject to the houſe of Auſtria: eaſt long. 25°, and north lat. 47°.

CROP, the collection of corn, hay, &c. that any piece of ground affords.

The great buſineſs of the farmer is to produce the largeſt crops he can, and, at the ſame time, to injure his land the leaſt. The common way of ſowing exhauſts the whole land, without giving half the nouriſhment that it might give to the corn. Inſtead of the ſcattering way of ſowing corn by the hand, if it be let in with the drill, in ſingle, double, treble, or quadruple rows, and an interval of five feet of naked ground be left between theſe ſeries of rows, the uſe of horſe-hoeing in theſe intervals will be found to give all that the farmer requires: the crops will be larger, though ſo great a quantity of ground is left vacant, than if all were ſown over, as the plants will ſtand vaſtly thicker in the rows, and will have twenty or thirty ſtalks a-piece; and the more the ſucceſſive crops are planted, and the oftener the ground is hoed in this manner, the better will the plants be maintained, and every crop will be larger and larger from the ſame ground, without dunging, or without changing the ſort of plant, as is uſually neceſſary in other caſes. See the articles HUSBANDRY, and INTERVALS.

This is very evident in ſeveral parts of the ſame field, where this ſort of huſbandry has been entered upon at different times, and ſome have a firſt crop, others a ſecond, and others a third, all growing up at the ſame time, the older worked land always invariably ſhewing the beſt crop. Dunging and fallowing are both neceſſary to recover land to its virtue, in the common way, after a few crops. Theſe are both of them expences to the farmer; but the horſe-hoeing, when the corn is ſown in rows, anſwers all the intent of them, and is much leſs expenſive. It has, in ſhort, every year, the good effect of a ſummer fallow, though it every year produces a good crop, and no time, or uſe of it, is loſt to the farmer.

CROP, or CRAW, of birds, *ingluvies*. See the article INGLUVIES.

CROPPER, in ornithology, the engliſh name

name of a ſpecies of pigeon, ſo called from the large crop or bag under its beak. See the article PIGEON.

CROSETTES, in architecture, the returns in the corners of chambranles, or door-caſes, or window-frames, called alſo ears, elbows, aniones, *&c.*

CROSIER, or CROZIER, a ſhepherd's crook; a ſymbol of paſtoral authority, conſiſting of a gold or ſilver ſtaff, crooked at the top, carried occaſionally before biſhops and abbots, and held in the hand when they give the ſolemn benedictions. The cuſtom of bearing a paſtoral ſtaff before biſhops is very antient. Regular abbots are allowed to officiate with a mitre and croſier. Among the Greeks none but a patriarch had a right to the croſier.

CROSIER, in aſtronomy, four ſtars in the ſouthern hemiſphere, in the form of a croſs, ſerving thoſe who ſail in ſouth latitudes to find the antarctic pole.

CROSLET, or CROSSELET. See the article CROSSELET.

CROSS, *crux*, in antiquity, a ſpecies of puniſhment, or rather the inſtrument wherewith it was inflicted, conſiſting of two pieces of wood, croſſing each other. This puniſhment was only inflicted on malefactors and ſlaves, and thence called *ſervile ſupplicium*. The moſt uſual method was to nail the criminal's hands and feet to this machine, in an erect poſture; though there are inſtances of criminals ſo nailed with their head downward.

Invention of the CROSS, a feſtival obſerved on May 3, by the latin church, in memory of the empreſs Helena's (the mother of Conſtantine) finding the true croſs of Chriſt, on mount Calvary, where ſhe erected a church for the preſervation of it.

Exaltation of the CROSS, a grand feſtival ſolemnized on September, 14, in commemoration of Heraclius's reſtoring to mount Calvary, the true croſs, that had been carried off by Coſroes king of Perſia, upon taking the city of Jeruſalem.

Order of the CROSS, an order of ladies inſtituted in 1668, by the empreſs Eleanora de Gonzagua, wife of the emperor Leopold, on occaſion of the miraculous recovery of a little golden croſs, wherein were incloſed two pieces of the true croſs, out of the aſhes of a part of the palace that had been burnt down: though the fire burnt the caſe wherein it was incloſed, and melted the cryſtal, it appears that the wood had not received the leaſt damage.

CROSS, in botany. See CRUCIFORM.

CROSS, in dialling. See DIAL.

CROSS, in heraldry, is defined by Guillim, an ordinary compoſed of fourfold lines, whereof two are perpendicular, and the other two tranſverſe; for ſo we muſt conceive of them, though they are not drawn throughout, but meet, by couples, in four right angles, near about the feſſe-point of the eſcutcheon. The content of a croſs is not always the ſame; for when it is not charged, it has only the fifth part of the field; but if it be charged, then it muſt contain the third part thereof.

This bearing was beſtowed on ſuch as had performed, or, at leaſt, undertaken ſome ſervice for Chriſt and the chriſtian profeſſion; and is therefore held by ſeveral authors the moſt honourable charge in all heraldry. What brought it into ſuch frequent uſe was the antient expeditions into the holy land, the croſs being the enſigns of that war.

In theſe wars, ſays Mackenzy, the Scots carried St. Andrew's croſs; the French, a croſs, argent; the Engliſh, a croſs, or; the Germans, ſable; the Italians, azure; the Spaniards, gules.

Guillim enumerates thirty-nine different croſſes uſed in heraldry, the ſeveral names whereof follow: 1. A croſs voided. 2. A croſs wavy voided. 3. A croſs patee fimbriated. 4. A croſs patee fitched in the foot. 5. A croſs patee on three parts, and fitched on the fourth. 6. A croſs engrailed. 7. A croſs potence. 8. A croſs flory. 9. A croſs potence voided. 10. A croſs avelane. 11. A croſs patee lambeaux. 12. A croſs furchee. 13. A croſs croſlet. 14. A croſs croſlet fitchee at the point. 15. A croſs botone. 16. A croſs pomel. 17. A croſs urdee. 18. A croſs degraded fitchee. 19. A croſs potent. 20. A croſs potent fitched. 21. A croſs calvary. 22. A croſs croſlet ſet on degrees. 23. A croſs patriarchal. 24. A croſs anchored. 25. A croſs moline. 26. A croſs clechee. 27. A croſs fleury or fleur-de-liſee. 28. A croſs double fitchee. 29. A croſs a ſeize points. 30. A croſs milrine. 31. A croſs raguled. 32. A croſs pointed voided. 33. A croſs pall. 34. A tau, or St. Anthony's croſs. 35. A croſs voided and couped. 36. A croſs couped pierced. 37. A croſs moline pierced lozenge-

zenge-wiſe. 38. A croſs moline quarter-pierced. 39. A ſaltier, or St. Andrew's croſs. See the articles VOIDED, WAVY VOIDED, &c.

Columbier makes eighty-two diſtinct ſorts of croſſes, of which we ſhall only mention ſuch as differ from thoſe enumerated above, as, 1. A croſs remplee, which is only one croſs charged with another. 2. A croſs party, that is, one half of one colour, and the other of another. 3. A croſs quartered, that is, the oppoſite quarters of ſeveral colours. 4. A croſs of five pieces, that is, of ſo many colours. 5. A croſs mouſſue and alaiſee. 6. A croſs barbee. 7. A croſs croiſſantee or creſcented, that is, having a creſcent at each end. 8. A croſs forked of three points. 9. A croſs pomettee of three pieces. 10. A croſs reſſercellee. 11. A croſs pointed. 12. A croſs anchored and ſuranchored. 13. A croſs anchored with ſnakes heads. 14. A croſs orled. 15. A high croſs. 16. A croſs rayonnant. 17. A croſs of Malta. 18. A croſs of the Holy Ghoſt. 19. A croſs forked like the antient reſts for muſquets. 20. A croſs with eight points. 21. A croſs bourdonnee. 22. A croſs cramponnee. 23. A croſs cablee. 24. A croſs inclining. 25. A croſs paternoſtree, made of beads. 26. A croſs treſle. 27. A croſs fleuronnee. 28. A vuidee, clechee, and pommettee. 29. A croſs crenellee and baſtillee. 30. A croſs with four ſteps to every arm. 31. A croſs rounded. 32. A croſs and a half. 33. A croſs eſtoille. 34. A croſs corded. 35. A croſs doubled of ſix pieces ſet together. 36. A double croſs ſplit in pale. 37. A long croſs cut in pieces and diſmembered. 38. A croſs couped or cut through in feſs, of the two contrary colours to the field. 39. A chevron ſurmounted of an half croſs. 40. Four tails of ermine in a croſs. 41. Four pieces of vair, placed croſs-ways, and counter-pointing in the center. 42. The croſs or ſword of St. James. 43. A croſs potence cramponnee on the dexter upper arm, and potence about the middle of the ſhaft.

CROSS, in ſurveying, an inſtrument conſiſting of a braſs circle, divided into four equal parts, by two lines interſecting each other at the center; at the extremity of each line there is a ſight fixed, ſtanding perpendicularly over the line, with holes below each ſlit, for the better diſcovery of diſtant objects. This inſtrument is mounted on a ſtand, and is but little known, and leſs uſed among us, though abroad it is often uſed in ſurveying. See SURVEYING.

CROSS-BAR-SHOT, a bullet with an iron-bar paſſing through it, and ſtanding ſix or eight inches out at both ſides: it is uſed at ſea, for deſtroying the enemy's rigging.

CROSS-BATTERY, in the military art. See the article BATTERY.

CROSS-BILL, in ornithology, the engliſh name of the loxia. See the article LOXIA.

CROSS-GRAINED, in joinery. Timber is ſaid to be croſs-grained, where a bough, or ſome branch, ſhoots out on a part of the trunk of the tree; for the grain of the branch, ſhooting forward, runs acroſs that of the trunk; and if it be in wood well grown, it will ſcarce be perceived, except in working.

CROSS-JACK, in a ſhip, a yard ſlung at the upper end of the mizen-maſt, without any halliards or ties, and uſed to ſpread and hale on the mizen-top-ſail ſheets.

CROSS MULTIPLICATION, in arithmetic. See the article MULTIPLICATION.

CROSS-STAFF, the ſame with fore-ſtaff. See the article FORE-STAFF.

CROSS-TREES, in a ſhip, four pieces of timber, bolted and let into one another acroſs, at the head of the maſt. Their uſe is to keep and bear the top-maſt up; for the foot of the top-maſt is always faſtened into them.

CROSS-WORT, in botany, the engliſh name of the cruciata, or valantia of authors. See the article VALANTIA.

It is ſaid to be one of the principal vulneraries, and a good expectorant.

CROSSELET, a little or diminutive croſs, uſed in heraldry, where the ſhield is frequently ſeen covered with croſſelets; alſo feſſes and other honourable ordinaries, charged or accompanied with croſſelets. Croſſes frequently terminate in croſſelets. See plate LXII. fig. 5.

CROSSEN, a town of Sileſia upon the Oder, ſituated in 15° 30′ eaſt longitude, and 52° 5′ north latitude.

CROTALARIA, in botany, a genus of the diadelphia-decandria claſs of plants, whoſe flower is papilionaceous; the vexillum is cordated, acute, large, and depreſſed at the ſides; the alæ are ovated, and only as long as half the vexillum; the carina is acuminated, and of the length of the alæ; the root is a ſhort turgid pod, conſiſting of one cell, and containing two valves;

valves; the ſeed is either one or two, globoſe and kidney-ſhaped.

CROTALOPHORUS, the RATTLE-SNAKE, in zoology. See the article RATTLE-SNAKE.

CROTALUM, in antiquity, a kind of caſtagnettas, or muſical inſtruments, found on medals, in the hands of the prieſts of Cybele.

The crotalum differed from the ſiſtrum, though authors often confound the two. It conſiſted of two little braſs plates, or rods, which were ſhook in the hand, and ſtriking againſt each other, made a noiſe.

CROTAPHITES, in anatomy, a muſcle of the lower jaw, ſerving to draw it upwards. Its fibres ſpring from the bones of the forehead, the ſinciput, ſphenoides, and temporale, which meeting, and, as it were, entering under the os jugale, whence alſo this muſcle receives ſome fibres, proceed to the proceſſus corone, into which they are inſerted.

CROTCHES, in ſhip-building, very crooked timbers in the hold or bread-room, from the mizen-ſtep aft, fayed croſs the keelſon, to ſtrengthen the ſhip in the wake of the half-timbers. See plate LVIII. fig. 6. n° 1.

Iron-CROTCHES, crooked pieces of iron, uſed on board ſloops and long-boats, which go with ſhoulder-of-mutton-ſails, for the boom to lodge on. *Ibid.* n° 2.

CROTCHET, in muſic, one of the notes or characters of time, marked thus ♩, equal to half a minim, and double of a quaver. See the articles CHARACTER, MINIM, and QUAVER.

A dot added to the crotchet thus ♩·, increaſes its time by one half, that is, makes it equal to a crotchet and a half.

CROTCHET, in printing, a ſort of ſtraight or curved line, always turned up at each extreme; ſerving to link ſuch articles as are to be read together; and uſed in analitical tables, *&c.* for facilitating the diviſions and ſubdiviſions of any ſubject.

CROTCHETS are alſo marks or characters, ſerving to incloſe a word or ſentence, which is diſtinguiſhed from the reſt, being generally in this form [ ] or this ( ).

CROTON, TURNSOLE PLANT, in botany, a genus of plants of the monoecia-polyandria claſs, the male flowers of which being leſs than the female flowers, conſiſt of five oblong obtuſe petals, ſcarce larger than the cup: the petals of the female flower are the ſame as in the male; the fruit is a roundiſh capſule with three cells, each cell having two valves; the ſeeds are ſolitary, large, and ovated.

CROTOY, a town of France, ſituated in the province of Picardy, at the mouth of the river Somme: eaſt long. 1° 30′, and north lat. 50° 15′.

CROUP *of a horſe*, in the manege, the extremity of the reins above the hips.

The croup ſhould be large and round, ſo that the tops of the two hanch-bones be not within view of each other. It ſhould have its compaſs from the hanch-bones to the very dock or onſet of the tail; and ſhould be divided in two by a channel or hollow all along to the dock.

A rocking croup is when a horſe's fore quarters go right, but his croup ſwings from ſide to ſide: when ſuch a horſe trots one of the hanch-bones will fall and the other riſe, like the beam of a balance; a ſign that he will not be very vigorous.

CROUPADE, in the manege, a leap, in which the horſe pulls up his hind legs, as if he drew them up to his belly. Croupades differ from caprioles and balotades, in this, that in croupades the horſe does not jerk, as he does in the other two airs.

CROUPER, or CRUPPER. See the article CRUPPER.

CROW, or CARRION-CROW, in ornithology, the engliſh name of a ſpecies of corvus, about the ſize of the largeſt tame pigeon, and all over of a fine deep black colour, with large eyes and reflex briſtles at the noſtrils. See plate LXI. fig. 1. n° A,

Royſton CROW, the engliſh name of another ſpecies of corvus, with the body grey, the head, throat, wings, and tail black. See plate LXI. n° B.

Scare CROW, the engliſh name of the black larus, with grey wings and red legs. See the article LARUS.

CROW, in mechanics, a kind of iron-lever with a claw at one end, and a ſharp point at the other: uſed for heaving or purchaſing great weights. See plate LVII. fig. 5.

CROW'S BILL, among ſurgeons, a kind of forceps, for drawing bullets and other foreign bodies out of wounds.

CROW'S FEET, in the military art, machines of iron, having four points, each about three or four inches long, ſo made that whatever way they fall, there is ſtill a point up: they are thrown upon breaches or in paſſes where the enemy's cavalry are to march, proving very troubleſome by running into the horſe's feet and laming them.

CROW'S FEET, in a ſhip, ſmall lines or ropes,

ropes, ſometimes eight or ten, reeved through the deadmen's eyes; and ſcarce of any other uſe than to make a ſhew of ſmall rigging. They are uſually placed at the bottom of the back-ſtays of the fore-top-maſt, mizen-top-maſt, and gallant-top-maſt. See plate LVI. fig. 1.

CROW'S FOOT, the engliſh name of the ranunculus. See RANUNCULUS.

CROW-NET, a device for taking wild-fowl in winter, being a net about ten yards long, and three wide, with meſhes about two inches in width, verged on the ſides with good ſtrong cord, and extended out very ſtiff, upon long poles made for that purpoſe. It may be uſed for pigeons, crows, and the like, in corn fields newly ſown, or in ſtubble-fields.

CROW-STAVES, the two upright pieces inſerted into the box of a plough, and bored with a number of holes, by means of which they ſupport a tranſverſe piece called the pillow of the plough. See the article PLOUGH.

CROWLAND, a market-town of Lincolnſhire: weſt long. 10′, and north lat. 52° 40′.

CROWN, an ornament worn on the head by kings, ſovereign princes, and noblemen, as a mark of their dignity.

In ſcripture there is frequent mention of crowns, and the uſe of them ſeems to have been very common among the Hebrews. The high prieſt wore a crown, which was a fillet of gold placed upon the forehead, and tied with a ribbon of hyacinth colour, or azure blue. It ſeems alſo as if private prieſts, and even common Iſraelites wore alſo a ſort of crown, ſince God commands Ezekiel not to take off his crown, nor aſſume the marks of one in mourning. This crown was no more than a ribbon or fillet, with which the Jews and ſeveral people in the eaſt girt their heads. And indeed the firſt crowns were no more than a bandelet drawn round the head, and tied behind, as we ſtill ſee it repreſented on medals round the heads of Jupiter, the Ptolemy's, and kings of Syria. Afterwards they conſiſted of two bandelets: by degrees they took branches of trees of divers kinds; at length they added flowers, inſomuch that Claudius Saturninus ſays, there was not any plant whereof crowns had not been made. The woods and groves were ſearched to find different crowns for the ſeveral deities; and they were uſed not only on the ſtatues and images of the gods, by the prieſts in ſacrificing, and by kings and emperors, but alſo on altars, temples, doors of houſes, ſacred veſſels, victims, ſhips, &c. Some authors conclude, from paſſages in Euſebius Cæſarenſis, that biſhops had likewiſe antiently their crowns.

The roman emperors had four kinds of crowns, ſtill ſeen on medals, *viz.* a crown of laurel, a radial or radiating crown, a crown adorned with pearls and precious ſtones, and the fourth a kind of bonnet or cap, ſomething like the mortier. The Romans had alſo various kinds of crowns, which they diſtributed as rewards of military atchievements; as, 1. The oval crown, made of myrtle, and beſtowed upon generals, who were entitled to the honours of the leſſer triumph, called ovation. See OVATION. 2. The naval or roſtral crown, compoſed of a circle of gold, with ornaments repreſenting beaks of ſhips, and given to the captain who firſt grappled, or the ſoldier who firſt boarded, an enemy's ſhip. Lipſius believes the corona navalis and roſtrata, to have been two diſtinct ſpecies, but they are generally thought to have been the ſame. 3. The crown called in latin, vallaris, or caſtrenſis, a circle of gold raiſed with jewels or paliſades; the reward of him who firſt forced the enemy's entrenchments. 4. The mural crown, a circle of gold indented and embatteled; given to him who firſt mounted the wall of a beſieged place, and there lodged a ſtandard. 5. The civic crown, made of the branch of a green oak, and given to him who had ſaved the life of a citizen. 6. The triumphal crown, conſiſting at firſt of wreaths of laurel, but afterwards made of gold; proper to ſuch generals as had the honour of a triumph. 7. The crown called obſidionalis, or graminea, made of graſs growing on the place; the reward of a general who had delivered a roman army from a ſiege. 8. The crown of laurel, given by the Greeks to their athletæ; and by the Romans to thoſe who had negociated or confirmed a peace with an enemy: this was the leaſt honourable of all. We meet alſo with the corona aurea, often beſtowed on ſoldiers, without any other additional term; the radial crown, given to princes at their tranſlation among the gods; athletic crowns, and crowns of laurel, deſtined to crown victims at the public games, poets, orators, &c. All thoſe crowns were marks of nobility to the wearers; and upon competitions with rivals for rank and dignities

BRITISH MUSEUM

Fig. 1. ANTIENT CROWNS.

N.°1. Oval. *N.°2.* Naval. *N.°3.* Caſtrenſis. *N.°4.* Mural.



N.°5. Civic. *N.°6.* Triumphal. *N.°7.* Obſidionalis. *N.°8.* Radial.

Fig. 2. ROYAL CROWNS.

N.°1. Imperial. *N.°2.* Britiſh. *N.°3.* French.



N.°4. Spaniſh. *N.°5* Papal. *N.°6.* Electoral.

Fig. 3.

CROWNS of the Blood Royal of Great Britain.

Prince of Wales. Younger Sons. Nephews.

N.°1. *N.°2* *N.°3.*



Fig. 4.

CROWNS of NOBILITY.

N.°1. Duke's



N.°2. Marquiſs's *N.°3.* Earl's. *N.°4.* Viſcount's. *N.°5.* Baron's.



J. Goſſage ſculp.

ties, often determined the preference in their favour. See plate LIX. fig. 1. n° 1, 2, 3, &c.

CROWN, in heraldry, is uſed for the repreſentation of that ornament, in the mantling of an armory to expreſs the dignity of perſons.

Radiated or pointed crowns, are thoſe of the antient emperors, which had twelve points, repreſenting, as is thought, the twelve months of the year. Thoſe crowns were called pearled or flowered, which have pearls or leaves of ſmallage, parſley, &c. Such were antiently almoſt all crowns, even thoſe of ſovereign princes, though they were not uſed on their armories till about two hundred years ago.

The imperial CROWN is a bonnet or tiara, with a ſemicircle of gold, ſupporting a globe with a croſs at top. See plate LIX. fig. 2. n° 1.

The britiſh CROWN is adorned with four croſſes, between which there are four fleurs de lis: it is covered with four diadems, which meet at a little globe ſupporting a croſs. *Ibid.* n° 2.

The french CROWN is a circle of eight fleurs de lis, encompaſſed with ſix diadems, bearing at top a double fleur de lis, which is the creſt of France. *Ibid.* n° 3.

The ſpaniſh CROWN is adorned with large indented leaves, and covered with diadems terminating in a globe, ſurmounted with a croſs. *Ibid.* n° 4.

The crowns of almoſt all other kings are adorned with large leaves, bordered with four, ſix, or eight diadems, with a globe and croſs at top.

The papal CROWN is compoſed of a tiara and a triple crown encompaſſing it, with two pendants like the biſhop's mitres. Theſe crowns repreſent the pretended triple capacity of the pope, as high prieſt, ſupreme judge, and ſole legiſlator of chriſtians. *Ibid.* n° 5.

An electoral CROWN, or coronet, is a ſcarlet cap turned up with ermine, and cloſed with a ſemicircle of gold, all covered with pearls, with a globe at top, ſurmounted with a golden croſs. *Ibid.* n° 6.

CROWNS *of britiſh princes of the blood.* 1. The prince of Wales's crown conſiſts alternately of croſſes and fleurs de lis, with one arch, in the middle of which is a ball and croſs, as in the royal diadem. 2. That of all the younger ſons and brothers of the king, conſiſts likewiſe of croſſes and fleurs de lis alternately, but without any arch, or being ſurmounted with a globe and croſs at top. 3. That of the other princes of the blood conſiſts alternately of croſſes and leaves like thoſe in the coronet of dukes, &c. *Ibid.* fig. 3. n° 1, 2, 3.

CROWNS *of noblemen* are a duke's, compoſed of leaves of ſmallage, or parſley: that of a marquis, of flowers and pearls placed alternately: an earl's has no flowers about the circle, like the duke and marquis, but only points riſing, and a pearl on every one of them: a viſcount has neither flowers nor points raiſed above the circle, like the other ſuperior degrees, but only pearls placed on the circle itſelf without any limited number: a baron's has only ſix pearls on the golden border, not raiſed, to diſtinguiſh him from the earls; and the number of them limited to ſhew he is inferior to the viſcount. *Ibid.* fig. 4. n° 1, 2, 3, &c.

CROWN-ROYAL, an order of knighthood inſtituted, as is ſaid, by Charlemain, to reward the Friezlanders, who had done him eminent ſervice in his wars againſt the Saxons. The knights bore an imperial crown embroidered with gold as a badge of their honour. Father Heylot thinks that this order never exiſted but in the imagination of ſome modern writers.

CROWN, in commerce, a general name for coins both foreign and domeſtic, which are of, or very near, the value of five ſhillings ſterling. See the article COIN.

CROWN, in architecture, denotes the uppermoſt member of the corniche, called alſo corona, and larmier. See the article LARMIER.

CROWN, in aſtronomy, a name given to two conſtellations, the one called borealis, the other meridionalis. See the article CORONA.

CROWN, in an eccleſiaſtical ſenſe, is uſed for the clerical tonſure, which is the mark and character of eccleſiaſtics of the romiſh church. It is a little circle of hair ſhaved from the crown of the head, more or leſs large, according to the quality of the orders received. That of a mere clerk is the ſmalleſt, that of prieſts and monks the largeſt.

CROWN, in geometry, is a plane ring included between two concentric perimeters, and is generated by the motion of ſome part of a right line round a center, the ſaid moving part not being contiguous to the center.

The area of a crown will be had by multiplying its breadth by the length of the middle periphery; for a ſeries of terms in

arithmetic progreſſion being $n \times \frac{a+w}{2}$, that is, the ſum of the firſt and laſt multiplied by half the number of terms, the middle element muſt be $\frac{a+w}{2}$; wherefore that multiplied by the breadth, or ſum of all the two terms, will give the crown.

CROWN *of colours*, certain coloured rings which like halos appear about the body of the ſun or moon, but of the colours of the rainbow, and at a leſs diſtance than the common halos. Theſe crowns, Sir Iſaac Newton ſhews to be made by the ſun's ſhining in a fair day, or the moon in a clear night, through a thin cloud of globules of water or hail all of the ſame bigneſs. And according as the globules are bigger or leſſer, the diameters of theſe crowns will be larger or ſmaller; and the more equal theſe globules are to one another, the more crowns of colours will appear, and the colours will be the more lively.

CROWN-OFFICE, an office that belongs to the king's bench court, of which the king's coroner or attorney is commonly maſter. In this office, the attorney general and clerk of the crown ſeverally exhibit informations for crimes and miſdemeanors at common law, as in the caſe of batteries, conſpiracies, libelling, *&c.* on which the offender is liable to pay a fine to the king.

Clerk of the CROWN. } See { CLERK.
Pleas of the CROWN. } See { PLEA.
Officers of the CROWN. } See { OFFICER.

CROWN-GLASS, denotes the fineſt ſort of window-glaſs. See the article GLASS.

CROWN-GRAFTING. See GRAFTING.

CROWN-POST, in architecture, a poſt which in ſome buildings ſtands upright in the middle between two principal rafters, and from it there go ſtruts or braces to the middle of each rafter. It is ſometimes called a king's piece, or joggle piece.

CROWN-WHEEL *of a watch*, the upper wheel next the balance, which by its motion drives the balance, and in royal pendulums is called the ſwing-wheel.

CROWN-WORK, in fortification, an outwork having a very large gorge, generally the length of the curtin of the place, and two long ſides terminating towards the field in two demi-baſtions, each of which is joined by a particular curtin to a whole baſtion, which is the head of the work. The crown-work is intended to incloſe a riſing ground, or to cover the head of a retrenchment.

CROWN-IMPERIAL, *corona imperialis*, in botany, is ranked by Linnæus under the fritillaria. See FRITILLARIA.

CROWN-IMPERIAL-SHELL, a beautiful ſpecies of voluta, the head of which is ſurrounded with a ſeries of ſharp pointed tubercles, ſo as to reſemble an open crown: it has alſo two broad and very beautiful zones running round it.

CROWNED, in general, ſomething ornamented with a crown. See CROWN.

CROWNED, in the manege; a horſe is ſaid to be crowned, when, by a fall, or any other accident, he is ſo hurt or wounded in the knee, that the hair ſheds and falls off, without growing again.

CROWNED HORN-WORK, in fortification, a horn-work with a crown-work before it. See CROWN-WORK.

CROWNED TOPS, the firſt head of a deer, ſo called becauſe the croches are raiſed in form of a crown. See CROCHES.

CROWNING, in architecture, is underſtood of any thing that finiſhes a decoration. Thus a corniche, a pediment, acroteria, are called crownings. See the article ACROTERIA.

Thus alſo the abacus is ſaid to crown the capital. And any member or moulding is ſaid to be crowned, when it has a fillet over it. And a niche is crowned when it is covered with a capital.

CROYDON, a market-town in Surry, about ten miles ſouth of London.

CRUCIAL INCISION, in ſurgery, an inciſion made in form of a croſs.

CRUCIANELLA, in botany, a genus of the tetrandria-monogynia claſs of plants. The flower conſiſts of one ſingle petal: the tube is of the figure of a cylinder, larger than the cup, and the limb is quadrifid and ſmall. The fruit is two capſules growing together, and containing oblong ſolitary ſeeds.

CRUCIBLE, a chemical veſſel made of earth, and ſo tempered and baked as to endure the greateſt fire. They are uſed to melt metals, and to flux minerals, ores, *&c.*

The figure of a crucible is commonly that of an obtuſe conoid, with its baſe at the top, and obtuſe apex at the bottom; whence the conical figure may be varied, till it comes to the hollow ſegment of a ſphere. It is a rule that the lower and wider they are made, the more eaſily the volatile matter flies from the fixed, and that the fire is applied to more of the ſurface,

face, both of the whole ſubject and its fixed part. See plate LVII. fig. 2.

The crucibles moſt generally uſed are thoſe of Heſſe and Auſtria; but becauſe the former are ſandy, and cannot ſuſtain the fire after they are made wet, and the latter are blackiſh, from the admixture of iron in their compoſition, thoſe of Heſſe are leſs capable of reſiſting lead, and thoſe of Auſtria leſs proper for the preparation of ſalts and antimony. Beſides, when the crucible is required to be pretty large, the Heſſian ones are very inconvenient; for they can ſcarce be uſed more than once: they muſt be heated very equably and gradually, and if they are touched with tongs, &c. unleſs when red hot, they immediately ſplit: and thoſe of Auſtria, when new, hurt both the colour and ductility of gold and ſilver. For theſe reaſons, many prefer the mixture of which the glaſs-founders make their crucibles. Others order a mixture of the powder of common tiles, chalk, and linſeed oil; and others, a large piece of chalk to be cut into the form of a crucible, and boiled in linſeed oil for twenty-four hours. There are many other compoſitions for making crucibles, for which we refer the reader to *Cramer*'s *Elementa Artis Docimaſticæ*.

CRUCIFIX, a croſs upon which the body of Chriſt is faſtened in effigy, uſed by the roman catholics to excite in their minds a ſtrong idea of our Saviour's paſſion.

They eſteem it an eſſential circumſtance of the religious worſhip performed at the altar; and on Good Friday they perform the ceremony of adoring it, which is done in theſe words, *O crux ave, ſpes unica*; *hail thou croſs, our only hope*. The officiating prieſt uncovers the crucifix, elevates it with both his hands, and ſays, *ecce lignum crucis*; *behold the wood of the croſs*. The people anſwer, *in quo ſalus mundi pependit*; *on which the Saviour of the world ſuffered death*. Then the whole congregation bow with great reverence, and devoutly kiſs the holy wood.

CRUCIFIXION, a capital puniſhment by nailing the criminal to a croſs. See the article CROSS.

CRUCIFORM, in general, ſomething diſpoſed croſs-wiſe; but more eſpecially uſed by botaniſts, for flowers conſiſting of four petals diſpoſed in the form of a croſs: ſuch are the flowers of cabbage, rocket, wall-flower, &c. See FLOWER. From this ſtructure of the flower, Tournefort has denominated one of his claſſes of plants *cruciformes*; comprehending all plants with cruciform-flowers, called by Linnæus tetradynamia. See the articles TETRADYNAMIA and BOTANY.

CRUCIS EXPERIMENTUM. See the article EXPERIMENTUM-CRUCIS.

CRUDITY, among phyſicians, is applied to undigeſted ſubſtances in the ſtomach; to humours in the body which are unconcocted, and not prepared for expulſion; and to the excrements. There are two remarkable crudities in the ſtomach, the acid and nidoroſe. The firſt is when the aliments turn into a fixed acid liquamen more or leſs viſcid, being not ſufficiently attenuated and volatilized, which is the origin of chronical diſeaſes. An acid crudity diſcovers itſelf by the heart-burn, by acid eructations in abundance, and by coſtiveneſs. It is corrected by abſorbent and alkaline medicines, by volatile aromatics, &c. after which cathartics may be given; for if this method be not obſerved, purging medicines will not make their proper evacuations, but only cauſe gripings and ſpaſms in the bowels. A nidoroſe crudity is when the aliments are ſo far corrupted, that they are turned into a putrilaginous liquamen of a very unſavory taſte and ſmell, which is called a nidor. It is attended with fetid eructations ſomething like the ſmell of fried eggs, or ſtinking fiſh; and very often with the heart-burn, and a ſort of nauſea riſing into the mouth from the ſtomach. With relation to the cure, an emetic ſhould be given, or at leaſt the body gently purged with rhubarb and tamarinds, after which acidulated juleps are good.

The crudity of the humours or morbific matter in a diſeaſe, is diſcovered chiefly from a fault in the quantity or quality of the circulating as well as the ſecreted humours, as of ſweat, mucus, ſaliva, urine, pus, blood, &c.

Crudity of the urine is a bad ſign in fevers; in ardent fevers it is a ſign of phrenſy.

CRUISE, in the ſea-language, ſignifies to ſail back and fore within a certain ſpace of the ſea, as well to annoy the enemy, as to protect our own trading veſſels.

CRUISERS, in the britiſh navy, men of war ſent upon a cruiſe. See the article CRUISE.

CRUOR, among anatomiſts, ſometimes ſignifies the blood in general; ſometimes only the venous blood; and ſometimes extravaſated, or coagulated blood.

CRUPPER, in the manege, the buttocks of a horſe, the rump; alſo a thong of leather put under a horſe's tail, and drawn up by thongs to the buckle behind the ſaddle, ſo as to keep him from caſting the ſaddle forwards on his neck.

CRURA CLITORIDIS, in anatomy, two legs of the clitoris, which run from the oſſa pubis, and are three times as long as the clitoris in its natural ſtate. See the article CLITORIS.

CRURA MEDULLÆ OBLONGATÆ, the two largeſt legs or roots of the medulla oblongata, which proceed from the cerebrum. See BRAIN, CEREBRUM, and MEDULLA OBLONGATA.

CRURÆUS, or CRUREUS MUSCULUS, in anatomy, a fleſhy maſs, covering almoſt all the foreſide of the os femoris, between the two vaſti, which likewiſe cover the edges of this muſcle on each ſide. It is fixed to the foreſide of the os femoris, from the anterior ſurface of the great trochanter, down to the loweſt quarter of the bone, by fibres which run down ſucceſſively over each other, between the two vaſti; and are partly united to theſe two muſcles, ſo that they do not ſeem to form a diſtinct muſcle.

CRURAL, in anatomy, an epithet given to the artery which conveys the blood to the crura, or legs, and to the vein by which this blood returns towards the heart. The crural artery ſprings from the external branch of the iliac artery, upon which it lies, and is divided into two parts, the external and internal: the external is ſmaller, and is diſtributed throughout the exterior part of the thigh; the internal is larger, and forms the popliteæ, the ſurales, and the tibial arteries, and is afterwards, from the extremities of theſe, divided into a multitude of branches, to which anatomiſts have given no name, in the foot. The crural vein, which runs to the feet, and the internal branch of which, towards the internal malleolus, is called the ſaphæna; and its external about the knee, poplitæa; in the intermediate part of the leg it is called ſuralis; and about the great toe of each foot, the cephalic vein of the foot.

CRUS, in anatomy, all that part of the body contained between the buttocks and the toes; it is divided into the thigh, leg, and foot. See the articles THIGH, LEG, and FOOT.

CRUSCA, an italian term ſignifying bran, is in uſe amongſt us to denote that celebrated academy called della cruſca, eſtabliſhed at Florence, for purifying and perfecting the tuſcan language.

As this academy took its name from its office, which is to refine the language, and ſeparate it from the bran, its device is a ſieve, and the motto, IL PIV BEL FIOR NE COGLIE. That is, *it gathers the fineſt flour thereof.* In the apartment where the academy meets, every thing bears alluſion to the name and device. The ſeats are in form of a baker's baſket, and the cuſhions reſemble ſacks.

CRUSTA VILLOSA, in anatomy, the fourth tunic, or coat, of the ſtomach. See the article STOMACH.

Innumerable villi, or fibrillæ, are ſeen on the inner ſurface of this coat, riſing every where perpendicularly from it, ſuppoſed, by Dr. Drake, to be excretory ducts to the ſubjacent glands.

CRUSTA LACTEA, in medicine, the ſame with achor, being ſcabby eruptions with which the heads of children are often troubled. See the article ACHOR.

In the cure, externals, eſpecially ſuch as are repellent, ſhould be avoided; and things ſhould be given inwardly which correct and temperate the blood, and expel the noxious matter by a diaphoreſis. After the *primæ viæ* are purged, both the nurſe and child ſhould take alexipharmics in the morning, and the teſtaceous powders, with calx antimonii, amber and cinnabar, in the afternoon.

CRUYSAGE, a ſpecies of ſhark with a triangular head, ſomewhat approaching to the figure of that of the zygæna, or hammer-headed ſhark. See ZYGÆNA.

CRUZ, or St. CROIX, one of the Caribbee-iſlands, ſituated about ſixty miles ſouth-eaſt of Porto Rico, weſt longitude 64°, and north latitude 17° 30′.

CRUZADO, the ſame with croiſade. See the article CROISADE.

CRYPTOGAMIA, κρυπτογαμια, one of Linnæus's claſſes of plants, the organs of fructification of which is either concealed within the fruit itſelf, or ſo minute as to eſcape obſervation. See BOTANY.

To this genus belong the moſſes, muſhrooms, ferns, liver-worts, &c. See the articles MOSS, MUSHROOM, &c.

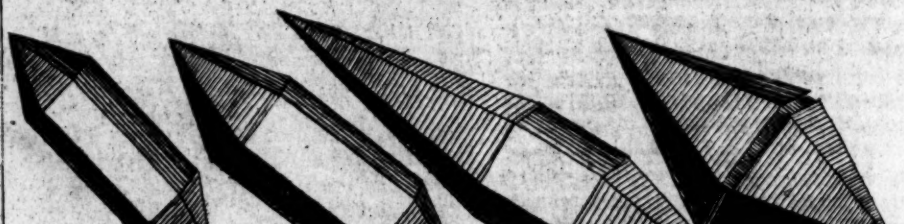
CRYPTOGRAPHY, the art of writing in cipher, or with ſympathetic ink. See the articles CIPHER and INK.

CRYSTAL, κρυσταλλος, in natural hiſtory, the name of a very large claſs of foſſils; hard, pellucid, and naturally colourleſs; of regularly angular figures, compoſed of

BRITISH MUSEUM

CRYSTALS.

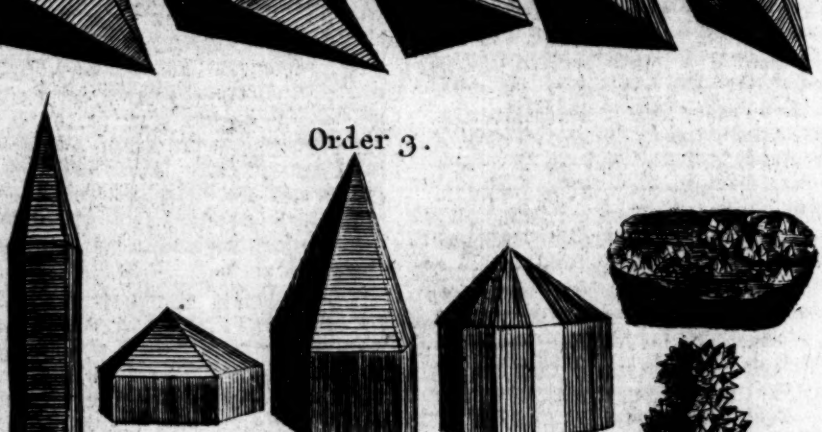
Order 1.



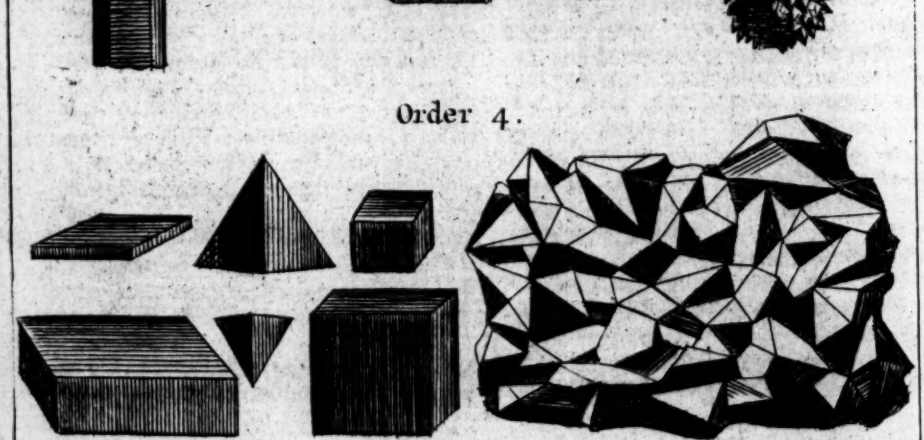
Order 2.



Order 3.



Order 4.



S. Jefferys sculp.

of ſimple, not filamentous plates; not flexible nor elaſtic, giving fire with ſteel; not fermenting in acid menſtrua, and calcining in a ſtrong fire.

The orders of pure cryſtal are three; the firſt is perfect columnar cryſtals, with double pyramids, compoſed of eighteen planes, in an hexangular column, terminated by an hexangular pyramid at each end: the ſecond order is that of perfect cryſtals, with double pyramids, without a column, compoſed either of twelve or of ſixteen planes, in two hexangular pyramids, joined cloſely, baſe to baſe, without the intervention of any column: the third order is that of imperfect cryſtals, with ſingle pyramids, compoſed either of twelve or ten planes, in an hexangular or pentangular column, affixed irregularly, at one end, to ſome ſolid body, and terminated, at the other, by an hexangular or pentangular pyramid.

Theſe are all the general forms into which cryſtal, when pure, is found concreted: but under theſe there are almoſt infinite varieties in the number of angles, and the length, thickneſs, and other accidents of the columns and pyramids.

When cryſtal is blended with metalline particles at the time of its formation, it aſſumes a variety of figures wholly different from theſe, conſtituting a fourth order, under the name of metalline cryſtals: when that metal is lead, the cryſtal aſſumes the form of a cube; when it is tin, of a quadrilateral pyramid, with a broad baſe; when iron, the cryſtal is found concreted in rhomboidal cryſtals: theſe cryſtals are very common about mines; but the common ſpars, which are liable to be influenced in the ſame manner by the metals, and to appear in the very ſame form, are to be carefully diſtinguiſhed from them. There is one very eaſy teſt for this purpoſe, which is, that all ſpars are ſubject to be diſſolved by aqua-fortis, and effervеſce violently only on their touching it: but it has no ſuch effects on cryſtal. See plate LX. where n° 1. repreſents the firſt order, n° 2. the ſecond, n° 3. the third, and n° 4. the metalline cryſtals.

The pebble cryſtal is common enough in all parts of the world; but that which is formed of hexangular columns, affixed to a ſolid baſe at one end, and terminated by a hexangular column at the other, is infinitely more ſo: this is what we call ſprig or rock cryſtal, and is the ſpecies deſcribed by moſt authors under the name of cryſtal of the ſhops, or that kept for medicinal uſe.

It is to be choſen the cleareſt, pureſt, and moſt tranſparent that can be had: it ſhould be proved to be no ſpar, by means of aqua-fortis, or by drawing a point of it along a pane of glaſs, which it cuts in the manner of a diamond. It is found in vaſt abundance in many parts of England and Ireland; and in Germany, it is yet more frequent. It is found about Briſtol of an amethyſtine tinge: in Sileſia and Bohemia it is ſtained to the colour of the ruby, ſapphire, emerald and topaz, in which caſe jewellers make great advantage of it, ſelling it under the name of accidental ſapphire, &c.

Medical writers report cryſtal to be an aſtringent and lithontriptic; and being calcined, is given in diarrhœas, in the fluor albus, and in caſes of gravel in the kidneys: it is alſo much recommended as a dentifrice; but it wears away the enamel of the teeth, and decays them. With regard to the formation of cryſtal, various were the opinions of the antients, nor are the moderns leſs undetermined. Dr. Hill, by a careful analyſis of water, proves that cryſtal, as well as ſpar, can be, and continually is, ſuſpended in water, and raiſed in form of vapour; and waits only the proper evaporation of that vapour, to concrete; that its ſmalleſt and original concretions, are neceſſarily in the regular form the body afterwards appears in; and that a congeries of theſe, being made by means of attraction, are gradually dilated, and ſpread equally over the maſs already formed, by the action of the ambient fluid, and that aggregates of theſe particles can therefore never alter its form.

CRYSTAL is alſo uſed for a factitious body, caſt in glaſs-houſes, called cryſtal-glaſs; being, in fact, no more than glaſs carried, in the compoſition and manufacture, to a greater perfection than the common glaſs.

The beſt kind of glaſs-cryſtal is that called Venice cryſtal, made at Moran, near Venice. See the article GLASS.

CRYSTALS, in chemiſtry, ſalts or other matters ſhot, or congealed, in the manner of cryſtal. See CRYSTALLIZATION.

CRYSTALS *of tartar*. See CREAM *of tartar*.

CRYSTAL MINERAL. See the article *Sal* PRUNELLÆ.

CRYSTALS *of ſilver*, or *lunar* CRYSTALS, are ſilver reduced into the form of ſalts, by

by the pointed acids of ſpirit of nitre. Theſe cryſtals are like the ſolutions of an immediate cauſtic: they burn the ſkin on the ſlighteſt touch. There is another kind prepared for internal uſe: theſe are a violent purgative, and are given in dropſies and palſies: their doſe is from three to eight grains. See SILVER.

CRYSTALS *of mars*, called alſo ſalt or vitriol of mars, a preparation of oil of vitriol and filings of iron, of uſe in opening obſtructions of all kinds, and ſtrengthening the viſcera. See PREPARATIONS *of* IRON.

CRYSTAL *of venus*, called alſo vitriol of venus, copper reduced into the form of vitriol by ſpirit of nitre. It is alſo uſed as a cauſtic. See the articles COPPER and VITRIOL.

CRYSTALLI, among phyſicians, eruptions about the ſize of a lupin, white and tranſparent, which ſometimes break out all over the body.

CRYSTALLINE, in general, ſomething compoſed of, or reſembling cryſtal. See the article CRYSTAL.

CRYSTALLINE HEAVENS, in antient aſtronomy, two ſpheres, imagined between the primum mobile and the firmament, in the ptolemaic ſyſtem, which ſuppoſes the heavens ſolid, and only ſuſceptible of a ſingle motion. See the article PTOLEMAIC SYSTEM.

According to Regio Montanus, the firſt cryſtalline ſerves to account for the ſlow motion of the fixt ſtars, cauſing them to advance a degree in ſeventy years, from weſt to eaſt, according to the order of the ſigns, which occaſions the proceſſion of the equinoxes: the ſecond ſerves to account for the motion of trepidation, whereby the celeſtial ſphere vibrates from one pole towards another, occaſioning a difference in the ſun's greateſt declination. The modern aſtronomers account for theſe motions in a more natural and intelligible manner. See EQUINOX and DECLINATION.

CRYSTALLINE HUMOUR, in anatomy, a thick, compact humour, in form of a flatiſh convex lens, ſituated in the middle of the eye, ſerving to make that refraction of the rays of light, neceſſary to make them meet in the retina, and form an image thereon, whereby viſion may be performed. See the article EYE.

It is included by the aſſiſtance of an extremely fine tunic in the fovea of the vitreous humour, and is ſuſpended by means of the ciliar ligament, between the aqueous and vitreous humour, immediately behind the pupil; in this place it hangs free, and is moveable by means of the ligament juſt mentioned. It is compoſed of a multitude of lamellæ, like the coats of an onion; and therefore alſo pellucid and vaſculous. There is alſo a ſmall quantity of the aqueous humour contained within or under its coat.

CRYSTALLIZATION, in chemiſtry, the concretion of a ſalt, before diſſolved in water. See the article SALT.

The intentional end of cryſtallization, is to render the ſalts pure and diſtinguiſhable, as well by freeing them from feculencies, and giving them their proper form, as by ſeparating each kind from every other with which they may happen to be mixed.

The manner of performing it is to make a ſaturate ſolution of the ſalts, in boiling water, either by adding the ſalts, if dry, to the water, or by evaporating the redundant water, if they were before diſſolved, and then putting the ſolution into a proper veſſel, and ſuffering it to ſtand at reſt, in a cool place, till the cryſtals are formed. This is perfected in a longer or ſhorter time, according to the degree of heat or cold of the weather. It is nevertheleſs beſt, not to be too haſty in taking out the cryſtals, for there will be ſome continuance of their increaſe for a conſiderable length of time, and the quantity therefore obtained, by each operation, proportionably greater. When the full quantity of cryſtals is formed, the remaining ſolution, called, in this caſe, the mothers, is to be poured off; and what the cryſtals retain, muſt be drained off from them, which may be beſt done by putting them into an earthen culendar, on a ſheet of filtering paper.

The cryſtals being thus taken from their mothers, they may be again evaporated, or dry ſalts may be added to them, whilſt boiling, till a ſaturation of the hot ſolution is again produced, and on their being treated as before, a ſecond quantity of cryſtals will be obtained. By the ſame method repeated, nearly the whole quantity of ſalts may be converted into cryſtals.

This is all that is neceſſary, when the ſalts are pure; but if they are mixed with any feculencies, it is requiſite that, before the ſolution is ſet to ſhoot, filtration ſhould be uſed.

CRYSTALLOIDES, the cryſtalline tunic

nic of the eye; a fine membrane containing the cryſtalline humour. See the article CRYSTALLINE HUMOUR.

CRYSTALLOMANCY, κρυσταλλομαντεια, in antiquity, a kind of divination, performed by means of a mirror, wherein the figures of the things required are ſaid to have been repreſented.

CUB, a bear's whelp. Among hunters, a fox and martern of the firſt year, are called cubs.

CUBA, an iſland of North America, ſituated in the Atlantic ocean, between 74° and 87° of weſt long. and between 20° and 23° north lat. being eight hundred miles and upwards in length from eaſt to weſt, and generally about ſeventy miles broad. It lies about fifty miles weſt of Hiſpaniola, and ſeventy-five north of Jamaica.

CUBAGUA, an american iſland, ſituated between the iſland of Margaretta and Terra Firma, and ſubject to Spain: weſt long. 64°, and north lat. 10° 15′.

CUBATURE *of a ſolid*, in geometry, the meaſuring the ſpace contained in it; or finding the ſolid content of it.

CUBE, in geometry, a ſolid body, conſiſting of ſix equal ſquare ſides. See plate LVII. fig. 3. where ABCD conſtitutes the top ſquare, AEFB, one of the ſides, &c.

The ſolidity of any cube is found by multiplying the ſuperficial area of one of the ſides by the height. Cubes are to one another in the triplicate ratio of their diagonals; and a cube is ſuppoſed to be generated by the motion of a ſquare plane, along a line equal to one of its ſides, and at right angles thereto; whence it follows, that the planes of all ſections, parallel to the baſe, are ſquares equal thereto, and, conſequently, to one another.

CUBE, or CUBIC NUMBER, in arithmetic, that which is produced by the multiplication of a ſquare number by its root; thus, 64 is a cube number, and ariſes by multiplying 16, the ſquare of 4, by the root 4.

CUBE, or CUBIC *quantity*, in algebra, the third power in a ſeries of geometrical proportionals continued; as a is the root, $a\,a$ the ſquare, and $a\,a\,a$ the cube. All cubic numbers may be ranged into the form of cubes; as 8 or 27, whoſe ſides are 2 and 3, and their baſes 4 and 9; whence it appears, that every true cubic number, produced from a binomial root, conſiſts of theſe parts, *viz.* The cubes of the greater and leſſer parts of the root, and of three times the ſquare of the greater part multiplied by the leſſer, and of three times the ſquare of the leſſer multiplied by the greater, as,

$$\begin{array}{l} aa+2ab+bb \\ a+b \\ \hline aaa+2aab+abb \\ \qquad\quad aab+2abb+bbb \\ \hline aaa+3aab+3abb+bbb \end{array}$$

From hence it is eaſy to underſtand both the compoſition of any cubic number, and the reaſon of the method for extracting the cube root out of any member given. See the following article.

CUBE *root of any number, or quantity*, ſuch a number, or quantity, which, if multiplied into itſelf, and then, again, the product thence ariſing, by that number or quantity, being the cube root, this laſt product ſhall be equal to the number or quantity whereof it is the cube root, as 2 is the cube root of 8, becauſe two times 2 is 4, and two times 4 is 8; and $a+b$ is the cube root of $a^3+3a^2b+3ab^2+b^3$.

Every cube number has three roots, one real root, and two imaginary ones, as the cube number 8 has one real root 2, and two imaginary roots, *viz.* $\sqrt{-3}-1$ and $\sqrt{-3}+1$; and generally if a be the real root of any cube number, one of the imaginary roots of that number will be $\frac{a+\sqrt{-3aa}}{2}$ and the other $\frac{a-\sqrt{-3aa}}{2}$ See EXTRACTION.

Duplication of a CUBE. See the article DUPLICATION.

CUBEBS, *Cubeba*, of the ſhops, in the materia medica, a ſmall dried fruit, reſembling a grain of pepper, but often ſomewhat longer, brought into Europe from the iſland of Java. They are to be choſen large, freſh and ſound. Cubebs are an aromatic, though not of a very ſtrong ſmell; and are acid and pungent to the taſte, though leſs ſo than pepper. They abound in a fine, thin, eſſential oil, which may be ſeparated from them, in very conſiderable quantities, by diſtillation, in an alembic, with water, in the common way; they are warm and carminative, and are eſteemed good in vertigoes, palſies, and in diſorders of the ſtomach. The Indians ſteep them in wine, and eſteem them provocatives to venery. The doſe is from three grains to

to ſix or eight: but they are ſeldom given ſingly.

CUBIC, or CUBICAL, EQUATION, in algebra, one whoſe higheſt power conſiſts of three dimenſions, as $x^3 = a^3 - b^3$, or $x^3 + rxx = p^6$, &c. See the article EQUATION.

CUBIC *foot of any ſubſtance*, ſo much of it as is contained in a cube, whoſe ſide is one foot. See the article CUBE.

CUBIC HYPERBOLA. See the article HYPERBOLA.

CUBIC PARABOLA. See PARABOLA.

CUBIDIA, a genus of ſpars, ſo called from their being of the ſhape of a cube, or common dye. See the article SPAR.

CUBIT, in the menſuration of the antients, a long meaſure, equal to the length of a man's arm, from the elbow to the tip of the fingers.

Dr. Arbuthnot makes the engliſh cubit equal to 18 inches; the roman cubit equal to 1 foot, 5,406 inches; and the cubit of the ſcripture equal to 1 foot, 9,888 inches.

CUBITÆUS, in anatomy, the name of two muſcles; the one called cubitæus externus, being the firſt of the extenſor muſcles of the fingers, ariſes from the external extuberance of the humerus, and paſſing its tendon, under the ligamentum annulare, is inſerted into the fourth bone of the metacarpus, that ſuſtains the little finger: the other is the cubitæus internus, which ariſeth from the internal extuberance of the humerus, and upper part of the ulna, upon which it runs all along, till it paſſes under the ligamentum annulare, and is inſerted, by a ſtrong and ſhort tendon, into the fourth of the firſt order of the carpus.

CUBITUS, in anatomy, a bone of the arm, reaching from the elbow to the wriſt, otherwiſe called the ulna. The cubitus, for the ſake of the more eaſy and varied motion, is compoſed of a binary number of bones, called the cubitus, or ulna, and the radius. The ſituation of the ulna is interior, its length is greater than that of the radius, and has a motion of flexion and extenſion.

Fractured CUBITUS. The lower-part of the arm, which is called the cubitus, contains two bones, the radius and ulna: fractures of this part, therefore, ſometimes happen only to one, ſometimes to both theſe bones, and that ſometimes near their extremities, but oftener toward their middle; but, when they are both broke together, the bones are not only very eaſily diſtorted from each other, but they are not to be replaced without very great difficulty alſo: if one only ſhould, on the contrary, be broken, while the other remains whole, the fractured parts do not much recede out of their places, nor are they very difficult to reduce and retain; for the bone remaining ſound is found, in this caſe, to be a better direction and ſupport than either ſplints or bandages. When the fracture happens toward the lower head, near the pronator quadratus muſcle, the fractured part is ſtrongly drawn by that muſcle, and the intervening ligament that is extended between the radius and ulna, toward the ſound bone; and this makes it more difficult to replace. If the radius is to be replaced, whoſe fragment is contracted towards the ulna, an aſſiſtant muſt hold the arm, while the ſurgeon inclines the patient's hand towards the ulna, to draw back the contracted part of the radius. When this is done, he muſt carefully reduce them by compreſſion on both ſides with his hands, ſo as to reſtore the compreſſed muſcle between the radius and ulna, and the fragments of the radius, to their proper places. In this caſe, Heiſter directs, that the arm be bound up with the proper bandage, and the limb be afterwards placed in a ſort of caſe made of paſteboard or light wood, to be ſuſpended in a ſling put about the neck.

In ſetting a fracture of the ulna, the whole method muſt be the ſame with this of the radius, except that in the extenſion, the hand muſt be bent toward the thumb, and radius, before the diſtorted part of the ulna can be compreſſed into its proper place. When both bones of the cubitus are broken, the method of cure is much the ſame with that uſed to each of them, when broken ſingly; but there is required more ſtrength and circumſpection, both in the replacing them, and a great deal of caution in applying the bandage to retain them. Care muſt alſo be taken, that, while the arm continues in this caſe a great while, without motion, the mucilage of the joints does not harden, or the ligament become ſtiff, and the arm, or cubitus, be thereby rendered immoveable. To guard againſt this, it will be proper to unbind the arm once in two or three days, and o move it a little carefully and gently, backwards and forwards; and ſometimes to foment

it with warm water or oil, by which means its motion will be preſerved.

Luxated CUBITUS. The cubitus conſiſting of two bones, the ulna and radius, is articulated by a gynglymus; and the connection of theſe bones is ſuch, that the ulna, or cubitus, as being the largeſt bone, and ſeated in the lower part of the arm, does of itſelf perform the whole flexion and extenſion of the arm, yet it cannot perform thoſe motions without carrying the radius along with it; but, on the other hand, the radius may be turned along with the hand both inward and outward, without at all moving or bending the ulna, as when the pronation and ſupination of the hand are made thereby. Both theſe bones of the cubitus are ſo articulated with the lower head of the os humeri, that large protuberances are received into deep cavities or grooves, and the whole inveſted, and faſtened with exceeding ſtrong ligaments; ſo that, notwithſtanding the cubitus may be luxated in all four directions, outward or inward, backward or forward, yet it is but ſeldom that it ſuffers a perfect or entire diſlocation, unleſs the upper part of the ulna be broken, or the ligaments of the cubitus much weakened by ſome great external violence. The ſlighter and more recent luxations of this kind are, the more eaſy is the reduction of them. Be the caſe better or worſe, however, the patient muſt be placed in a chair, and both parts of the limb, the humerus and the cubitus, muſt be extended in oppoſite or contrary directions, by two ſtrong aſſiſtants, till the muſcles are found pretty tight, with a free ſpace between the bones; then the luxated bone muſt be replaced, either with the ſurgeon's hands alone, or with the aſſiſtance of bandages, that the proceſſes may fall into their ſinuſes; and when that is done, the cubitus muſt be ſuddenly bent. But if the tendons and ligaments are ſo violently ſtrained, that they can ſcarce perform their office, it will be proper to anoint them with emollient oils, ointments, and the fat of animals; or to apply emollient cataplaſms and fomentations. As ſoon as the reduction has been effected, the articulation muſt be bound up with a proper bandage, and the arm afterwards ſuſpended in a ſling hung about the neck. But care muſt be taken that the bandage is not kept on too long, nor the arm kept entirely without motion all the time, leſt the mucilage of the joint ſhould become inſpiſſated, and the articulation rendered, by that means, ſtiff, or the motion of the part be entirely loſt. To prevent this, it will be proper to undo the bandage every other day, and gently to bend, and extend the limb; afterwards compreſſes dipped in warm wine may be applied, and held on with the bandage.

CUBOIDES, or *Os* CUBOIDES, in anatomy, the ſeventh bone of the foot, ſo called from its reſembling a cube. It is ſituated in the external ſide of the tarſus, where it receives the outer bone of the metatarſus, and is articulated with the neighbouring bones.

CUBUS CUBI, the ninth power of any number or quantity. See POWER.

CUCKING-STOOL, antiently called tumbrel, an engine invented for the puniſhment of ſcolds, and unquiet women, by ducking them.

This inſtrument was a ſort of chair, in which the offender was faſtened, and ſo ducked: it was formerly made uſe of to puniſh bakers, and brewers, upon tranſgreſſing the laws made in relation to their ſeveral trades; for upon offending in this reſpect, they were ducked, or plunged in ſome ſtinking, muddy pond, by means of this chair.

CUCKOW, in ornithology, the engliſh name of a well known bird, called by zoologiſts cuculus. See CUCULUS.

CUCKOW-FLOWER, in botany, a name ſometimes given a plant, more generally called cardamine, or lady's ſmock. See the article CARDAMINE.

CUCKOW-SPIT, the ſame with froth-ſpit. See the article FROTH-SPIT.

CUCKOW-SPIT-INSECT, a ſpecies of cicada, ſo called from its producing the ſubſtance cuckow-ſpit. See CICADA.

CUCUBALUS, in botany, a genus of the decandria trigynia claſs of plants, whoſe corolla conſiſts of five petals; the ungues of which are of the length of the cup, the limb plain, and the bracteæ bifid. The fruit is a ſmall, roundiſh, accuminated capſule; the ſeeds are numerous and roundiſh. See plate LXI. fig. 2.

CUCULLARIA, in zoology, a ſpecies of phalænæ, or moths, with ſimple antennæ, a ſpiral tongue, and the forehead a little prominent. See the article PHALÆNA.

CUCULLARIS, in anatomy, a muſcle of the ſcapula, otherwiſe called trapezius: It ariſes from the os occipitis, the ſpinoſe apophyſes of the neck, and of

the ſeventh and eighth of the back. Its termination is at the ſpine of the ſcapula. It has the power of ſeveral very different motions: the different courſe of its ſeveral fibres enabling it, as they act differently, to move the ſcapula upwards, downwards, or backwards.

CUCULUS, the CUCKOW, in ornithology, a genus of birds, of the order of the picæ, the characters of which are theſe: the beak is ſmooth; the noſtrils are a little prominent; the tongue is entire, and ſagittated; the toes are four in number, two before and two behind.

The common cuckow is a bird of conſiderable beauty, which breeds with us, but does not remain all the year.

Its head, neck, and back are of a hoary colour, with ſome dark grey feathers; the wings are of a browniſh black, the throat of an undulated fleſh colour, and the belly whitiſh. This is the colour of the female; from which the male differs in ſome particulars. See plate LXIV. fig. 1.

The great ſpotted cuckow is about the ſize of a magpye, or jay, and is the moſt elegant bird of its kind. See plate LXVI. fig. 1.

The crown of the head is covered with ſoft feathers, of a bluiſh aſh-colour, ſomewhat reſembling a creſt; the upper part of the body is a dark brown; all the quill feathers of the wings are tipped with white, as are thoſe of the tail.

CUCUMBER, *cucumis*, in botany, a genus of the monoecia-ſyngeneſia claſs of plants: the corolla is formed of a ſingle companulated petal, and divided into five ſegments; the calyx and corolla of the female flower, are the ſame as thoſe in the male: the fruit is fleſhy like an apple, containing three cells; the ſeeds are numerous, compreſſed, ovato-acute, and placed in a double row. See plate LIV. fig. 9.

Beſides the uſe of cucumbers as a food, their ſeed is one of the four greater cold ſeeds of the ſhops, and is almoſt an univerſal ingredient in emulſions, and is found of great ſervice in fevers and nephritic complaints.

Wild CUCUMBER, the ſame with the elaterium, or momordica of botanical writers. See the article MOMORDICA.

CUCURBIT, in chemiſtry, an earthen or glaſs veſſel, ſo called from its reſemblance to a gourd, ariſing gradually from a wide bottom, and terminating in a narrow neck.

This inſtrument is of great uſe in chemical diſtillations, digeſtions, and ſublimations. The more the wideneſs of the bottom, at its largeſt part, ſurpaſſes the narrowneſs of the neck, and the narrower and longer the neck is, with the greater difficulty is the liquor in the cucurbit diſtilled. Upon theſe circumſtances depends the choice we ought to make of cucurbits.

Blind CUCURBIT is a ſmall inverted cucurbit adapted to another, in ſuch a manner, that the neck of the one is inſerted in that of the other. The veſſel call-d circulatory, is one of this kind.

CUCURBITA, the GOURD, in botany, a genus of the monoecia-ſyngeneſia claſs of plants; the corolla of which is formed of a ſingle companulated petal, divided into five ſegments. The fruit is apple-like, and contains three membranaceous cells: the ſeeds are numerous, compreſſed, tumid, obtuſe, and placed in two rows. See the article GOURD.

CUD, ſometimes means the inſide of the throat in beaſts, and ſometimes the food that they keep there, and chew over-again: from whence, *to chew the cud*, ſignifies, to ponder, think, or ruminate upon a thing.

CUD LOST; cattle ſometimes loſe the cud by chance, ſometimes by ſickneſs, poverty, mourning, *&c.* to cure which, take four laven of rye bread, and ſalt, and mixing it with human urine and barm, beat it in a mortar; then making a large ball or two thereof, put them down the beaſt's throat.

CUDDY, in great ſhips, a place lying between the captain-lieutenant's cabin, and the quarter-deck, under the poop. It is divided into partitions for the maſter and other officers.

CUDWEED, the engliſh name of a genus of plants called by authors gnaphalium. See the article GNAPHALIUM.

CUE, among ſtage-players, an item, or innuendo, given to the actors on the ſtage, what, or when to ſpeak.

CUENCA, a city, and biſhop's ſee, of New Caſtile, in Spain, about eighty-five miles eaſt of Madrid: weſt long. 2° 40′, and north lat. 40° 12′.

CUI *ante divortium*, a writ that a woman, divorced from her huſband, has to recover her lands and tenements, which, before her coverture, ſhe held in ſimple fee, in tail, or for life, from a perſon to whom the huſband had alienated them during the marriage, when it was not in her power to gainſay it.

CUI *in vita*, a writ of entry, which a widow

widow may have againſt him, to whom her huſband in his life-time did alienate her lands or tenements, without her conſent firſt had, and lawfully joining therein.

CUIRASSE, a piece of defenſive armour, made of iron plate, well hammered, ſerving to cover the body, from the neck to the girdle, both before and behind: whence,

CUIRASSIERS, cavalry armed with cuiraſſes, as moſt of the germans are: the french have a regiment of cuiraſſiers: but we have had none in the engliſh army, ſince the revolution.

CUL *de lamp*, in architecture, a term uſed for ſeveral decorations, both of maſonry and joinery, found in vaults and ceilings, to finiſh the bottom of works; and wreathed ſomething in manner of a teſtudo, particularly, a kind of pendentive in gothic vaults.

CUL *de four*, a ſort of ſpherical vault, like an oven. See the article VAULT.

CUL *de four of a niche*, ſignifies the arched roof of a niche, on a circular plan.

CULDEES, in church-hiſtory, a ſort of monkiſh prieſts, formerly inhabiting Scotland and Ireland. Being remarkable for the religious exerciſes of preaching and praying, they were called, by way of eminence, *cultores Dei*; from whence is derived the word culdees. They made choice of one of their own fraternity to be their ſpiritual head, who was afterwards called, the Scots biſhop.

CULEUS, in roman antiquity, the largeſt meaſure of capacity for things liquid, containing twenty amphoræ, or forty urnæ. It contained one hundred forty-three gallons three pints, engliſh wine meaſure; and was 11,095 ſolid inches.

CULEX, in zoology, a genus of two-winged flies, the mouth of which is tubular, like a ſiphon, but exceeding ſlender, and filiform.

Under this genus are comprehended the gnats, and humble-bees. See the article GNAT, &c.

CULIACAN, the capital of a province of the ſame name in Mexico, oppoſite to the ſouthern end of California. Weſt longit. 113°, and north latit. 24°.

CULLIAGE, a barbarous and immoral practice, whereby the lords of manors antiently aſſumed a right to the firſt night of their vaſſals brides.

CULLEMBACK, or CULLEMBERG, a marquiſate in the north-eaſt part of the circle of Franconia, in Germany.

CULLEN, a parliament town in Scotland, ſituated on the ſea-coaſt of Bamfſhire, weſt long. 2° 12′, and north lat. 57° 38′.

CULM, among botaniſts, a term uſed to denote the ſtalk of graſſes, hence called culmiferous plants. See the next article.

CULMIFEROUS PLANTS, in botany, ſuch plants as have a ſmooth jointed ſtalk, uſually hollow, and at each joint, wrapped about with ſingle, narrow, ſharp-pointed leaves, and their ſeeds contained in chaffy huſks, as wheat, barley, &c.

CULMINATION, in aſtronomy, the paſſage of any heavenly body over the meridian, or its greateſt altitude for that day.

The culmination of any ſtar may be found by the globe. See GLOBE.

As in the horizon all ſtars firſt appear and diſappear, ſo, in the meridian circle, they all ariſe to their greateſt height: and likewiſe, they are at the greateſt depreſſion, below the horizon, when they arrive at the ſame meridian. Now, ſince the meridian makes right angles, both with the equator and the horizon, it will divide the ſegments of the equator, and all its parallels, as well thoſe that lye above the horizon, as thoſe which are below it, into equal portions, and therefore the time between the riſing of a ſtar, and its culmination, or arrival at the meridian, will be equal to the time between this culmination and its ſetting.

The *medium cæli*, or mid heaven, is that part of the ecliptic which culminates.

CULMORE, a town of Ireland, in the county of Londonderry, and province of Ulſter, about five miles north of Londonderry: weſt long. 7° 40′, and north lat. 55°.

CULMUS, the culm of plants. See the article CULM.

CULPABLE, *Culpabilis*. See the article NON EST CULPABILIS.

CULPRIT, a formal reply of a proper officer in court, in behalf of the king, after a criminal has pleaded not guilty, affirming him to be guilty, without which the iſſue to be tried is not joined.

After an indictment, for any criminal matter, is read in court, the priſoner at the bar is aſked whether he is guilty, or not guilty, of the indictment? if he anſwers, not guilty, there is a replication by the clerk of the arraignments from the crown, by continuing

the charge of the guilt upon him, which is expreſſed in the word culprit.

The term culprit is a contraction of the latin *culpabilis*, and the old French word *prit*, now *pret*, importing that he is ready to prove the criminal guilty.

CULROSS, a parliament-town of Scotland, ſituated on the river Forth, about twenty-three miles north-weſt of Edinburgh: weſt long. 3° 34′, and north lat. 56° 8′.

CULTURE *of lands*. See AGRICULTURE.

CULTURE *of hops, wheat, barley*, &c. See the articles HOP, WHEAT, BARLEY, SOWING, PLANTING, &c.

CULVERIN, in the military art, a large cannon, or piece of artillery, for the kinds, weight, and proportions of which, ſee the article CANNON.

CULVERTAILED, among ſhip-wrights, ſignifies the faſtening, or letting, of one timber into another, ſo that they cannot ſlip out, as the carlings into the beams of a ſhip. See CARLINGS.

CUMBERLAND, one of the moſt northerly counties of England, ſeparated from Scotland by the frith and river of Solway. It gives the title of duke to his royal highneſs William duke of Cumberland, &c.

CUMMIN, *Cuminum*, a genus of the pentandria-digynia claſs of plants, the general corolla of which is uniform: the ſingle flowers conſiſt each of five inflexo-emarginated, and ſomewhat unequal petals: there is no pericarpium: the fruit is of an oval figure, and ſtriated: the ſeeds are two, of an oval figure, convex and ſtriated on one ſide, ſmooth and plain on the other.

Cumin ſeed is a good carminative, and ſtomachic; and is given with good ſucceſs in cholics, vertigoes, and other diſeaſes of the head.

It is alſo ſucceſsfully uſed externally in cataplaſms and fomentations, wherever a warm diſcutient is required. Its eſſential oil is one of the beſt carminatives in the ſhops; its doſe being two or three drops on ſugar. See ANISE.

CUNEIFORM, in general, an appellation given to whatever reſembles a wedge.

CUNEIFORM-BONE, in anatomy, the ſeventh bone of the cranium, called alſo os baſilare, and os ſphenoides. See the article SPHENOIDES.

CUNEIFORM BONES, or OSSA CUNEIFORMIA, are alſo three bones of the foot, all different in their ſizes, and articulated with the os naviculare, and with the three bones of the metatarſus, *viz.* thoſe which ſupport the great toe, the ſecond, and the third. See METATARSUS, and NAVICULARE.

CUNETTE, or CUVETTE, in fortification, a deep trench, about three or four fathoms wide, ſunk along the middle of a dry moat, to make the paſſage more difficult to the enemy.

CUNEUS, the wedge, in mechanics. See the article WEDGE.

CUNEUS, in antiquity, a company of infantry, drawn up in form of a wedge, the better to break through the enemy's ranks.

This was alſo the name of a ſeries of benches in the theatre at Athens, narrower near the ſtage, and broader behind, in reſemblance of a wedge.

CUNEUS, in natural hiſtory, a kind of foſſile muſcle-ſhells, with one ſide much longer than the other, and found in vaſt numbers in many parts of the kingdom.

Parabolic CUNEUS, in geometry. See the article PARABOLIC.

CUNICULUS, the RABBIT, in zoology, a well known animal of the lepus, or hare-kind, with an abrupt tail, and red eyes. See HARE and RABBIT.

CUNILA, in botany, a genus of the didynamia-gymnoſpermia claſs of plants, whoſe flower conſiſts of a ſingle ringent petal; the tube is ſhorter than the cup; the upper lip is erect, fornicated and emarginated; the lower lip is very ſlightly divided into three parts: there is no pericarpium, the fruit being ſhut up in the inner neck of the cup; there are four ovated ſeeds.

CUNNINGHAM, one of the four bailiwicks of Scotland, and one of the three into which the ſhire of Aire is ſubdivided. It lies north-eaſt of Kyle. Its chief town is Irwin. See the article AIRE.

CUNNUS, in anatomy, denotes the female pudendum. See PUDENDUM.

CUP, a veſſel of capacity of various forms, and materials, chiefly uſed to drink out of.

CUP, among botaniſts, the ſame with calyx. See the article CALYX.

CUPANIA, in botany, a genus of the pentandria-monogynia claſs of plants, the corolla of which conſiſts of five roundiſh, patent petals, leſs than the cup: the fruit is a coriaceous capſule, of a turbinated oval figure, formed of three valves, and containing only one cell; the ſeeds are ſix in number, and roundiſh; each has a proper receptacle of

Fig. 1. CROWS.



Fig. 2. CUCUBALUS.



Fig. 3. CUPRESSUS, the *CYPRESS-TREE*.



T. Jefferys sculp.


BRITISH
MUSEUM

of a companulated figure, and crenated, ſurrounding it.

CUPOLA, in architecture, a ſpherical vault; or the round top of the dome of a church, in form of a cup inverted. See the article DOME.

CUPPEL, or COPPEL, in chemiſtry. See the article COPPEL.

CUPPING, in ſurgery, the operation of applying cupping-glaſſes for the diſcharge of blood, and other humours, by the ſkin.

The operation of cupping is not confined to any particular member of the body; but wherever the cupping-glaſs is applied, it is fixed upon the ſkin, either intire or ſcarified, and hence we have a twofold diſtinction of cupping, into dry and gorey.

In dry cupping, the glaſs adheres to the ſkin, by expelling or rarefying its included air, by lighted flax, or the flame of a burning candle within it, ſo that the glaſs is preſſed upon the part with a conſiderable force, by the external air. The uſe of this dry cupping is twofold, either to make a revulſion of the blood, from ſome particular parts affected, or elſe to cauſe a derivation of it into the affected part, upon which the glaſs is applied: hence we have a reaſon why Hippocrates orders a large cupping-glaſs to be applied under the breaſts of a woman who has too profuſe a diſcharge of her menſes, intending thereby to make a revulſion of the blood upwards from the uterus. Dry cupping is alſo uſed, with ſucceſs, to make a revulſion, by applying the glaſſes to the temples, behind the ears, or to the neck and ſhoulders, for the removal of pains, vertigoes, and other diſorders of the head: they are applied to the upper and lower limbs, to derive blood and ſpirits into them, when they are paralytic; and, laſtly, to remove the ſciatica, and other pains of the joints. The operation in theſe caſes is to be repeated upon the part, till it looks very red, and becomes painful.

In Germany, and other northern countries, cupping is much oftener joined with ſcarification, than uſed alone; in which caſe the part is firſt to be cupped, till it ſwells and looks red, and the ſkin is to be punctured, or inciſed, by the ſcarifying inſtrument.

As ſeveral glaſſes, ſometimes ſix or eight, are often applied at once, the operator muſt manage his buſineſs ſo, that ſome glaſſes may be filling, while he is ſcarifying, and adapting the others. When the blood ceaſes to flow faſt enough, he muſt repeat his inciſions, cloſe by the former, and re-apply the cupping-glaſſes. The operation being finiſhed, and the ſkin well cleanſed with a ſponge, and warm water, it is next to be rubbed over with a bit of deer's ſuet, to promote the healing: but if the blood ſtill continues to flow, the ſkin is to be waſhed with ſpirit of wine and hungary water, binding it up with a compreſs and bandage.

The cupping-glaſs and inſtrument are repreſented in plate LXIV. fig. 2.

This inſtrument conſiſts of a braſs-box, on one of whoſe ſides are a number of lancets, moveable by a ſpring within the box. When this ſide is applied to the ſkin, the ſpring is to be raiſed by the handle A; and on depreſſing the button B, it cauſes the lancets to pierce the ſkin all at once.

Nux CUPRESSI. See the article NUX.

CUPRESSUS, the CYPRESS-TREE, a genus of the monoecia-monadelphia claſs of plants, having no corolla; the calyx of the male flower is a ſquama of an amentum; the antheræ, being four in number, are ſeſſile, and have no filaments: In the female flower, the calyx contains two, and is a ſquama of a ſtrobilus: It has no corolla, there are hollowed points in the place of ſtyles: there is no pericarpium: the fruit is a ſubgloboſe cone, ſhut up, opening with roundiſh and pointed ſquamas; under which is contained the ſeed, being an angular, acuminated, ſmall nut. See plate LXI. fig. 3.

CUR, or CYRUS, a river of Aſia, which taking its riſe in mount Caucaſus, and running ſouth through Georgia, and the province of Chervan, in Perſia, unites with the river Arras, or Araxes, and continues its courſe eaſtward to the Caſpian Sea.

CURASSOW, or CURACAO, one of the leſſer Antille-Iſlands, ſubject to the Dutch, and ſituated in 68° 30′, weſt long. and 12° 30′, north lat.

CURATE, properly ſignifies the parſon, or vicar of a pariſh, who has the charge, or cure, of the pariſhioners ſouls. See the article CURE.

CURATE, alſo ſignifies a perſon ſubſtituted by the incumbent, to ſerve his cure in his ſtead. A cure is to be licenſed or admitted by the biſhop of the dioceſe, or ordinary, having epiſcopal juriſdiction. By the ſtatute, curates, licenſed

licenſed by the biſhop, are to be appointed by him a ſtipend not exceeding 50l. *per annum*, nor leſs than 20l.

CURATOR, among civilians, a perſon regularly appointed to manage the affairs of minors, or perſons mad, deaf, dumb, *&c.* In countries, where the civil law prevails, minors have tutors aſſigned them, till they are of the age of fourteen, between which and twenty-five, they have curators appointed them. There are alſo curators for the eſtate of debtors, and of perſons dying without heirs.

CURATOR *of an univerſity*, in the united Netherlands, an officer that has the direction of the affairs of the univerſity, ſuch as the ſuperintendence of the profeſſors, the management of the revenues, *&c.* theſe officers, being elective, are choſen by the ſtates of each province. Leyden has three curators.

CURB, in the manege, a chain of iron, made faſt to the upper part of the branches of the bridle, in a hole, called the eye, and running over the horſe's beard. It conſiſts of theſe three parts, the hook fixed to the eye of the branch; the chain of SS's, or links; and the two rings or mailes. Large curbs, provided they be round, are always moſt gentle: but care is to be taken, that it reſt in its proper place, a little above the beard, otherwiſe the bitmouth will not have the effect that may be expected from it.

Engliſh watering bits have no curbs; the turkiſh bits called genettes, have a ring that ſerves inſtead of a curb.

To give a leap upon the CURB, is, to ſhorten the curb, by laying one of the mailes, or SS like joints of the chain. over the reſt.

CURB is alſo a hard and callous ſwelling, that runs along the inſide of a horſe's hoof, in the great ſinew behind, above the top of the horn, which makes him halt, and go lame, when he has been heated. It is to be cured by the like applications as are preſcribed in the ſpavin. See the article SPAVIN.

CURCULIO, in zoology, a genus of beetles, diſtinguiſhed from the other kinds, by having the antennæ affixed to a long horny roſtrum, or ſnout: of theſe there are ſeveral ſpecies enumerated by authors.

CURCUMA, TURMERIC, in botany, a genus of the monandria monogynia claſs of plants, the tube of whoſe corolla, being monopetalous, is narrow; its limb is divided into three ſegments, which are of a lanceolated figure, and patent; the nectarium is compoſed of a ſingle leaf, of an ovated, but pointed figure; it is larger than the ſegments of the petal, and is inſerted into the larger ſinus made by its opening: the fruit is a roundiſh capſule, compoſed of three valves, and containing three cells, in each of which there are a great number of ſeeds. See the article TURMERIC.

CURDISTAN, a province of Perſia, having Turcomania, or Armenia, on the north, and Eyraca Arabic, or Chaldea, on the ſouth.

CURDLING, the coagulating any fluid body, eſpecially milk.

It is ſaid that, at Florence, they curdle their milk, for the making of cheeſe, with artichoke-flowers, inſtead of the rennet uſed among us, for that purpoſe. The milk of women newly delivered is apt to curdle in their breaſts, which occaſions violent pains. It ariſes from the want of being ſucked, whence the cure and prevention of this diſorder is eaſily effected.

CURE *of ſouls*, a benefice in the chriſtian church, the incumbent whereof has the direction of conſciences within a pariſh.

This right is by the canoniſts called a cure *in foro interiore tantum*, to diſtinguiſh it from a cure *in foro exteriore*, ſuch as arch-deacons, *&c.* have.

CURETES, in antiquity, a ſort of prieſts called alſo corybantes, being, as ſome relate, the ſame with what the druids and bards were afterwards among the Gauls. They are ſaid to have been originally of Mount Ida in Phrygia; and to have been uſed to dance, at the noiſe of tabors and caſtanetta's.

CURFEW, or COURFEW, a ſignal given in cities, taken in war, *&c.* to the inhabitants to go to bed. Paſquin ſays, it was ſo called, as being intended to adviſe the people, to ſecure themſelves from the robberies and debaucheries of the night.

The moſt eminent curfew in England was that eſtabliſhed by William the conqueror, who appointed, under ſevere penalties, that, at the ringing of a bell, at eight o'clock in the evening, every one ſhould put out their lights and fires, and go to bed: whence to this day, a bell, rung about that time, is called a curfew-bell.

CURIA, in roman antiquity, a certain diviſion, or portion of a tribe. Romulus divided the people into thirty curiæ,

or wards, whereof there were ten in every tribe, that each might keep the ceremonies of their feasts and sacrifices in the temple, or holy place, appointed for every curia. The priest of the curia was called curio. See the article CURIO.

CURIA, in the english law, generally signifies a court; and has been taken for the customary tenants, who do their suit and service at the court of the Lord. See the article COURT.

CURIA *aquæ cursus*, a court held by the lord of the manor of Gravesend, for the better management of barges and boats that use the passage on the Thames, between that place and London, &c.

CURIA CLAUDENDA, a writ that lies, to compel a man to make a fence, or wall, between his lands and that of the plaintiff.

CURIA DOMINI, signifies the Lord's house, hall, or court, where all the tenants attend at the time of holding courts.

CURIA PENTICIARUM, a court held by the sheriff of Chester in a place there, called the Pendice, or Pentice.

CURIASS, or CURIASSE. See the article CURIASSE.

CURING, a term used for the preserving fish, flesh, and other animal substances, by means of certain additions of things, to prevent putrefaction. One great method of doing this, is by smoking the bodies with the smoke of wood, or rubbing them with salt, nitre, &c.

CURIO, in roman antiquity, the chief and priest of each curia, or ward, whose business was to officiate at the sacrifices of the curia, called curionia, and provide for them, the curia furnishing him with a sum of money on that consideration. See the article CURIA.

CURLED LEAF, the same with crisp leaf. See plate LXIV. fig. 3. and the article CRISP.

CURLEW, in ornithology, the english name of the numenius, with an arcuated beak, and black wings with white spots. See the article NUMENIUS.

CURRANS, or CURRANTS, the fruit of a species of grossularia. See the article GROSSULARIA.

The white and red sort are mostly used, for the black, and chiefly the leaves, upon first coming out, are in use to flavour english spirits, and counterfeit french brandy. Currans greatly asswage drought, cool and fortify the stomach, and help digestion.

CURRANTS also signify a smaller kind of grapes brought principally from Zant and Cephalonia. They are gathered off the bunches, and laid to dry in the sun, and so put up in large butts. They are opening and pectoral, but are more used in the kitchen, than in medicine.

Currants the hundred weight pay on importation 1 l. 2 s. $1\frac{35}{100}$ d. and draw back on exportation 1 l. 0 s. $7\frac{35}{100}$ d.

If imported in venetian ships, they pay the 112 lb. 1 l. 3 s. $7\frac{55}{100}$ d. and draw back 1 l. 1 s. $8\frac{85}{100}$ d. In other foreign bottoms they pay 1 l. 7 s. $4\frac{95}{100}$ d. and draw back 1 l. 5 s. $6\frac{45}{100}$ d.

CURRENT, in hydrography, a stream or flux of water in any direction. In the sea, they are either natural, occasioned by the diurnal motion of the earth round its axis, or accidental caused by the water's being driven against promontories, or into gulphs and streights, where wanting room to spread they are driven back, and thus disturb the ordinary flux of the sea. Dr. Halley makes it highly probable that in the Downs, there are under currents, by which as much water is carried out as is brought in by the upper currents.

CURRENTS in navigation, are certain settings of the stream, by which ships are compelled to alter their course or velocity, or both, and submit to the motion impressed upon them by the current. The knowledge of them being so necessary an article in navigation, we shall shew a more accurate way of discovering the way they set, together with their strength, than that of guessing by the ripplings of the water, and by the driving of the froth along shore. Take your ship's boat, with three or four men, a compass, a log line with a large log to it, and a kettle or iron pot with a quoil or two of inch rope fastened to its bale. When at a proper distance from the ship, heave your kettle overboard, and let it sink eighty or a hundred fathom, which will ride the boat nearly as fast as if at anchor. Heave your log, and turn your half minute glass, observing at the same time, to set the drift of the log by the compass, then will the knots run out during the half minute, give the current's strength, and the compass its setting. Now to know how to make proper allowances for currents, it is evident, if a current sets just with the course of the ship, then the motion of the ship is increased by as much as is the drift or velocity of the current.

current. And if a current ſets directly againſt the ſhip's courſe, then the motion is retarded in proportion to the velocity of the current. Hence it is plain, 1. If the velocity of the current be leſs than that of the ſhip, then the ſhip will get ſo much a head, as is the difference of theſe velocities. 2. If the velocity of the ſhip, then the ſhip will fall ſo much aſtern as is the difference of theſe velocities. 3. If the velocity of the current be equal to that of the ſhip, then the ſhip will ſtand ſtill, the one velocity deſtroying the other.

If the current thwarts the courſe of a ſhip, then it not only leſſens or augments her velocity, but gives her a new direction compounded of the courſe ſhe ſteers, and the ſetting of the current. Suppoſe a ſhip ſails by the compaſs directly ſouth, 96 miles in 24 hours, in a current that ſets eaſt 45 miles in the ſame time. Required the ſhip's true courſe and diſtance. To ſolve the problem, geometrically, draw AD to repreſent the ſouth and north line of the ſhip at A equal to 96: from D draw DC perpendicular to AD equal to 45, and join AC.



Then C will be the ſhip's true place, AC her true diſtance, and the angle CAD the true courſe. To find which, trigonometrically ſay, As AD the apparent diſtance is to DC, the current's motion, ſo is the radius to the tangent of the true courſe DAC. Conſequently the ſhip's true courſe in the preſent caſe will be found S. S. E. 2° 37′ eaſterly. Then for the true diſtance AC, it will be as the ſine of the courſe A: is to the departure DC: : radius: to the true diſtance AC = 106 miles.

Again, ſuppoſe a ſhip ſails ſouth eaſt 120 miles in 20 hours, in a current that ſets weſt by north, at the rate of two miles an hour; required the ſhip's true courſe and diſtance ſailed in that time. To ſolve this geometrically. Having drawn the compaſs, N. E. S. W. (plate LXII. fig. 6.) let C repreſent the place the ſhip ſailed from, draw the ſouth eaſt line CA, which make equal to 120, then will A be the place the ſhip caped at. From A draw AB parallel to the W. by N. line, CD, and equal to 40, the motion of the current in 20 hours, and join CB; then B will be the ſhip's true place at the end of twenty hours, CB her true diſtance, and the angle SCB her true courſe. To ſolve it trigonometrically. In the triangle ABC are given CA 120, AB 40, and the angle CAB equal to 34° 45′, the diſtance between the E. by S. and S. E. lines; whence the angles B and C will be found by caſe 4th of oblique trigonometry, thus B = 131° 52′, and the angle ACB = 14° 23′. Hence the true courſe is S. S. E. 2° 7′ eaſterly. Then for the true diſtance CB, it will be found by caſe 2d of oblique trigonometry equal to 89,53 miles. See the articles TRIANGLE, TRIGONOMETRY, COMPASS, &c.

CURRIERS, thoſe who dreſs and colour leather after it comes from the tan-yard. Perſons in London putting leather to be curried to any but freemen of the curriers company, and ſuch curriers not currying the leather ſufficiently, ſhall forfeit the wares or the value of them. And by 12 George II. cap. xxv. Curriers are to curry leather ſent to them, in ſixteen days between Michaelmas and Lady-day, and in eight days the reſt of the year, or ſhall forfeit 5l. on conviction before a juſtice of peace.

CURRYING, the method of preparing leather with oil, tallow, &c.

The chief buſineſs is to ſoften and ſouple cows and calves ſkins, which make the upper leathers and quarters of ſhoes, coverings of ſaddles, coaches, and other things which muſt keep out water. 1. Theſe ſkins, after coming from the tanner's yard, having many fleſhy fibres on them, the currier ſoaks them ſome time in common water. 2. He takes them out and ſtretches them on a very even wooden horſe; then with a paring knife, he ſcrapes off all the ſuperfluous fleſh, and puts them in to ſoak again. 3. He puts them wet on a hurdle, and tramples them with his heels, till they begin to grow ſoft and pliant. 4. He ſoaks them in train oil, which, by its unctuous quality, is the beſt liquor for this purpoſe. 5. He ſpreads them on large tables, and faſtens them at the ends. There with the help of an inſtrume

ſtrument called a pummel, which is a thick piece of wood, the under ſide whereof is full of furrows croſſing each other, he folds, ſqueezes, and moves them forwards and backwards ſeveral times, under the teeth of this inſtrument, which breaks their too great ſtiffneſs. This is what is properly called currying. The order and number of theſe operations is varied by different curriers, but the material part is always the ſame. 6. After the ſkins are curried, there may be occaſion to colour them. The colours are black, white, red, yellow, green: the other colours are given by the ſkinners, who differ from curriers in this, that they apply their colours on the fleſh ſide; the curriers on the hair ſide. In order to whiten ſkins, they are rubbed with lumps of chalk, or white lead, and afterwards with pumice-ſtone. 7. When a ſkin is to be made black, after having oiled and dried it, he paſſes over it a puff dipt in water impregnated with iron, and after this firſt wetting, he gives it another in a water prepared with ſoot, vinegar, and gum arabic. Theſe different dyes gradually turn the ſkin black, and the operations are repeated till it be of a ſhining black. The grain and wrinkles which contribute to the ſoupleneſs of calves and cows leather, are made by the reiterated folds given to the ſkin in every direction, and by the care taken to ſcrape off all hard parts on the coloured ſide.

CURSITOR, a clerk belonging to the court of chancery, whoſe buſineſs it is to make out original writs. In the ſtatute 18 Edw. III. they are called clerks of courſe, and are twenty-four in number, making a corporation of themſelves. To each of them is allowed a diviſion of certain counties, into which they iſſue out the original writs required by the ſubject.

CURSOR, in mathematical inſtruments, is any ſmall piece that ſlides, as the piece in an equinoctial ring-dial that ſlides to the day of the month; the little label of braſs divided like a line of ſines, and ſliding in a groove along the middle of another label, repreſenting the horizon in the analemma; and likewiſe a braſs point ſcrewed on the beam-compaſſes, which may be moved along the beam for the ſtriking of greater or leſs circles. See the articles ANALEMMA, *Beam* COMPASSES, &c.

CURTAILING, in farriery, is the docking or cutting off a horſe's tail. This practice is no where ſo much uſed as in England, it being a popular opinion, that the taking away the tail, makes the horſe's chine or back much ſtronger, and more able to ſupport a burden.

CURTATE DISTANCE, in aſtronomy, the diſtance of a planet from the ſun to that point where a perpendicular let fall from the planet meets with the ecliptic.

CURTATION, in aſtronomy, is the interval between a planet's diſtance from the ſun, and the curtate diſtance.

CURTESY, or COURTESY. See the article COURTESY.

CURTEYN, *curtana*, in the britiſh cuſtoms, king Edward the confeſſor's ſword, borne before the prince at coronations: its point is ſaid to be broken off, as an emblem of mercy.

CURTIN, CURTAIN, or COURTIN, in fortification, is that part of the rampart of a place which is betwixt the flanks of two baſtions bordered with a parapet five feet high, behind which the ſoldiers ſtand to fire upon the covered way, and into the moat. As it is the beſt defended of any part of the rampart, beſiegers never carry on their attacks againſt the curtin, but againſt the faces of the baſtions, becauſe of their being defended only by one flank.

Angle of the CURTIN, that contained between the curtin and the flank.

Complement of the CURTIN. See the article COMPLEMENT.

CURVATOR COCCYGIS, in anatomy, a name given by Albinus to a muſcle of the coccyx, diſcovered by himſelf, and not deſcribed by any other author.

It ariſes with a double head, one from the inner and the other from the lower and lateral part of the os ſacrum; and deſcending, terminates in three extremities. He gave the name from its office, which is the bending the coccyx.

CURVATURE *of a line*, is the peculiar manner of its bending or flexure by which it becomes a curve of ſuch and ſuch peculiar properties.

Any two arches of curve lines touch each other when the ſame right line is the tangent of both at the ſame point; but when they are applied upon each other in this manner, they never perfectly coincide, unleſs they are ſimilar arches of equal and ſimilar figures: and the curvature of lines admit of indefinite variety. Becauſe the curvature is uniform in a given circle, and may be varied at pleaſure in them, by enlarging or diminiſhing their

diameters: the curvature of circles ſerves for meaſuring that of other lines.

Of all the circles that touch a curve in any given point, that is ſaid to have the ſame curvature with it, which touches it ſo cloſely, that no circle can be drawn through the point of contact between them. And this circle is called the circle of curvature; its center, the center of curvature; and its ſemidiameter, the ray of curvature belonging to the point of contact. As in all figures, rectilinear ones excepted, the poſition of the tangent is continually varying; ſo the curvature is continually varying in all curvilinear figures, the circle only excepted. As the curve is ſeparated from its tangent by its curvature, ſo it is ſeparated from the circle of curvature in conſequence of the increaſe or decreaſe of its curvature: and as its curvature is greater or leſs, according as it is more or leſs inflected from the tangent, ſo the variation of curvature is greater or leſs, according as it is more or leſs ſeparated from the circle of curvature.

When any two curve lines touch each other in ſuch a manner that no circle can paſs between them, they muſt have the ſame curvature; for the circle that touches the one ſo cloſely that no circle can paſs between them, muſt touch the other in the ſame manner. And it can be made appear, that circles may touch curve lines in this manner; that there may be indefinite degrees of more or leſs intimate contact between the curve and the circle of curvature; and that a conic ſection may be deſcribed that ſhall have the ſame curvature with a given line at a given point, and the ſame variation of a curvature, or a contact of the ſame kind with the circle of curvature. The rays of curvature of ſimilar arches, in ſimilar figures, are in the ſame ratio as any homologous lines of theſe figures, and the variation of curvature is the ſame. See the article CURVE.

CURVE, in geometry, a line which running on continually in all directions, may be cut by one right line in more points than one.

Curves are divided into algebraical or geometrical and tranſcendental.

Geometrical or algebraical curves are thoſe whoſe ordinates and abſciſſes being right lines, the nature thereof can be expreſſed by a finite equation having thoſe ordinates and abſciſſes in it.

Tranſcendental curve, is ſuch as when expreſſed by an equation, one of the terms thereof is a variable quantity. See the article TRANSCENDENTAL.

Geometrical lines or curves are divided into orders, according to the number of dimenſions of the equation expreſſing the relation between the ordinates and abſciſſes, or according to the number of points, by which they may be cut by a right line. So that a line of the firſt order, will be only a right line expreſſed by the equation $y + ax + b = 0$. A line of the ſecond or quadratic order, will be the conic ſections and circle whoſe moſt general equation is $y^2 + \overline{ax+b} \times y + cx^2 + dx + e = 0$. A line of the third order, is that whoſe equation has three dimenſions, or may be cut by a right line in three points, whoſe moſt general equation is $y^3 + \overline{ax+b} \times y^2 + \overline{cx^2+dx+e} \times y + fx^3 + gx^2 + hx + k = 0$. A line of the fourth order, is that whoſe equation has four dimenſions, or which may be cut in four points by a right line, whoſe moſt general equation is $y^4 + \overline{ax+b} \times y^3 + \overline{cx^2+dx+e} \times y^2 + \overline{fx^3+gx^2+hx+k} \times y + lx^4 + mx^3 + nx^2 + px + q = 0$. And ſo on.

And a curve of the firſt kind (for a right line is not to be reckoned among curves) is the ſame with a line of the ſecond order; and a curve of the ſecond order, the ſame as a line of the third; and a line of an infinite order, is that which a right line can cut in an infinite number of points, ſuch as a ſpiral, quadratrix, cycloid, the figures of the ſines, tangents, ſecants, and every line which is generated by the infinite revolutions of a circle or wheel.

For the various curves of the firſt order and their properties, ſee the articles CONIC-SECTIONS, PARABOLA, HYPERBOLA, ELLIPSIS, &c.

As to the curves of the ſecond order, Sir Iſaac Newton obſerves they have parts and properties ſimilar to thoſe of the firſt: thus as the conic-ſections have diameters and axes, the lines cut by theſe are called ordinates, and the interſection of the curve and diameter, the vertex; ſo in curves of the ſecond order, any two parallel lines being drawn ſo as to meet the curve in three points, a right line cutting theſe parallels ſo as that the ſum of the two parts between the ſecant and the curve on one ſide, is equal to the third part terminated by the curve on the other ſide, will cut in the ſame manner all other

other right lines parallel to these, and meet the curve in three parts, so as that the sum of the two parts on one side will be still equal to the third part on the other side.

These three parts, therefore, thus equal, may be called ordinates or applicates: the secant may be stiled the diameter; the intersection of the diameter and the curve, the vertex; and the point of concourse of any two diameters, the center. And if the diameter be normal to the ordinates, it may be called axis; and that point where all the diameters terminate, the general center. Again, as an hyperbola of the first order has two assymptotes; that of the second, three; that of the third, four, &c. and as the parts of any right line lying between the conic hyperbola and its two assymptotes are every where equal, so in the hyperbola of the second order, if any right line be drawn cutting both the curve and its three assymptotes in three points, the sum of the two parts of that right line being drawn the same way from any two assymptotes to two points of the curve, will be equal to a third part drawn a contrary way from the third assymptote to a third point of the curve. Again, as in conic sections not parabolical, the square of the ordinate, that is the rectangle under the ordinates drawn to contrary sides of the diameter, is to the rectangle of the parts of the diameter which are terminated at the vertices of the ellipsis or hyperbola, as the latus rectum is to the latus transversum; so in non-parabolic curves of the second order, a parallelopiped under the three ordinates is to a parallelopiped under the parts of the diameter, terminated at the ordinates, and the three vertices of the figure, in a certain given ratio: in which ratio, if you take three right lines situated at the three parts of the diameter between the vertices of the figure, one answering to another, then these three right lines may be called the latera recta of the figure, and the parts of the diameter between the vertices, the latera transversa. And as in the conic parabola, having to one and the same diameter but one only vertex, the rectangle under the ordinates is equal to that under the part of the diameter cut off between the ordinates and the vertex, and the latus rectum; so in curves of the second order, which have but two vertices to the same diameter, the parallelopiped under three ordinates, is equal to the parallelopiped under the two parts of the diameter, cut off between the ordinates and those two vertices and a given right line, which therefore may be called the latus rectum. Moreover, as in the conic-sections, when two parallels terminated on each side of the curve, are cut by two other parallels terminated on each by the curve, the first by the third, and the second by the fourth; as here the rectangle under the parts of the first, is to the rectangle under the parts of the third; as the rectangle under the parts of the second, is to that under the parts of the fourth; so when four such right lines occur in a curve of the second kind, each in three points, then shall the parallelopiped under the parts of the first right line, be to that under the parts of the third; as the parallelopiped under the parts of the second line, to that under the parts of the fourth. Lastly, the legs of curves, both of the first, second, and higher kinds, are either of the parabolic or hyperbolic kind: an hyperbolic leg being that which approaches infinitely towards some assymptote; a parabolic, that which has no assymptote. These legs are best distinguished by their tangents; for if the point of contact go off to an infinite distance, the tangent of the hyperbolic leg will coincide with the assymptote; and that of the parabolic leg recede infinitely and vanish. The assymptote, therefore, of any leg, is found by seeking the tangent of that leg to a point infinitely distant; and the bearing of an infinite leg, is found by seeking the position of a right line parallel to the tangent, when the point of contact is infinitely remote: for this line tends the same way towards which the infinite leg is directed. For the other properties of curves of the second order, we refer the reader to Mr. Maclaurin's treatise de linearum geometricarum proprietatibus generalibus.

Sir Isaac Newton reduces all curves of the second order to the four following particular equations, still expressing them all. In the first, the relation between the ordinate and the abscisse, making the abscisse x and the ordinate y, assumes this form $xy^2+ey=ax^3+bx^2+cx+d$. In the second case, the equation takes this form $xy=ax^3+bx^2+cx+d$. In the third case, the equation is $y^2=ax^3+bx^2+cx+d$. And in the fourth case, the equation is of this form $y=ax^3+bx^2+cx+d$. Under these four cases,

the ſame author enumerates ſeventy-two different forms of curves, to which he gives different names, as ambigenal, cuſpidated, nodated, &c. See AMBIGENAL, CUSPIDATED, NODATED.

Of theſe ſeventy-two curves, nine are redundant hyperbolas without diameters, having three aſſymptotes including a triangle; twelve are redundant hyperbolas with only one diameter; two are redundant hyperbolas with three diameters; nine are redundant hyperbolas with three aſſymptotes, converging to a common point; ſix are deficient hyperbolas having no diameters; ſeven are defective hyperbolas having a diameter; ſeven are parabolic hyperbolas having no diameter; four are parabolic hyperbolas which have a diameter; four are hyperboliſms of the hyperbola; three are hyperboliſms of the ellipſe; two are hyperboliſms of the parabola; one a trident; five are diverging paraboras; and one a cubical parabola.

Beſides theſe, Mr. Stirling found out four more ſpecies of redundant hyperbolas, and Mr. Stone two more of the deficient hyperbolas.

Curves of the ſecond order by ſhadows. If (ſays Sir Iſaac Newton) upon an infinite plane illuminated from a lucid point the ſhadows of figures be projected, the ſhadows of the conic ſections will be always conic ſections; thoſe of the curves of the ſecond kind, will be always curves of the ſecond kind; thoſe of the curves of the third kind, will be always curves of the third kind, and ſo on *in infinitum*. And as a circle by projecting its ſhadow generates all the conic ſections, ſo the five diverging parabolas by their ſhadows, will generate and exhibit all the reſt of the curves of the ſecond kind: and ſo ſome of the moſt ſimple curves of the other kinds may be found which will form by their ſhadows upon a plane, projected from a lucid point, all the reſt of the curves of that ſame kind.

CURVES *of the ſecond order having double points.* As curves of the ſecond order may be cut by a right line in three points; and as two of theſe points are ſometimes coincident, theſe coincident interſections, whether at a finite or an infinite diſtance, are called the double point. And ſuch curves as have this double point, may be deſcribed by the following theorems, 1. If two angles P A D, P B D (plate LXII. fig. 7.) whoſe magnitude is given, revolve round the poles A and B given alſo in poſition, and their legs A P, B P with their point of concourſe P paſs over another right line: the other two legs A D, B D with their point of concourſe D, will deſcribe a conic ſection paſſing through the poles A, B, except where that line happens to paſs through either of the poles A or B, or when the angles B A D, A B D vaniſh together, in which caſes the point will deſcribe a right line. 2. If the legs A P, B P by their point of concourſe P deſcribe a conic ſection paſſing through one of the poles A; the other two A D, B D, with their point of concourſe D, will deſcribe a curve of the ſecond kind paſſing through the other pole B, and having a double point in the firſt pole A, unleſs the angles B A D, A B D vaniſh together; in which caſe the point D will deſcribe another conic ſection paſſing through the pole A. 3. But if the conic ſection, deſcribed by the point P, paſs through neither of the poles A, B, the point D will deſcribe a curve of the ſecond or third kind, having a double point: which double point will be found in the concourſe of the deſcribing legs A D, B D, when the two angles B A P, A B P vaniſh together. And the curve deſcribed will be of the ſecond kind when the angles B A D, A B D vaniſh together; otherwiſe it will be of the third kind, having two other double points in the poles A and B. See Mr. Maclaurin's Organica Geometria.

The general equation of all curves of the third kind, may be reduced to the following ten particular equations.

$$\left.\begin{array}{l}
1.\ y^4+fx^2y^2+gxy^3+hx^2y+iy^2+kxy+ly\\
2.\ y^4+fxy^3+gx^2y+hxy^2+ixy+ky\\
3.\ x^2y^2+fy^3+gx^2y+hy^3+ky\\
4.\ x^2y^2+fy^3+gy^2+hxy+iy\\
5.\ y^3+fxy^2+gx^2y+hy\\
6.\ y^3+fxy^2+gxy+hy
\end{array}\right\}=ax^4+bx^3+cx^2+dx+e.$$

$$\left.\begin{array}{l}
7.\ x^4+ex^3y+fxy^3+gxy^2+hy^2+ixy+ky\\
8.\ x^3y+exy^3+fx^2y+gy^2+hxy+iy\\
9.\ x^3y+ey^3+fxy^2+gxy+hy\\
10.\ x^3y+ey^3+fy^2+gxy+hy.
\end{array}\right\}=ax^3+bx^2+cx+d.$$

A a

Fig. 1. COTISE



Fig. 2. COUNTER-CHANGED, COMPONED, Ermine



N.o 1. N.o 2. N.o 3.

Fig. 3. CRAMPONÉE



Fig. 4. CRENELLÉ



Fig. 5. CROSSELETS

N.o 1.



N.o 2.

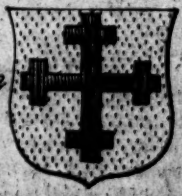


Fig. 6. CURRENT

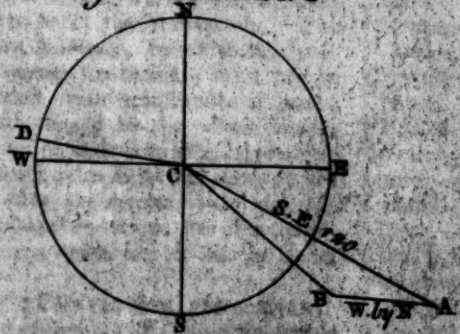


Fig. 7. CURVE.

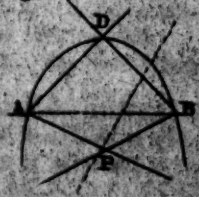
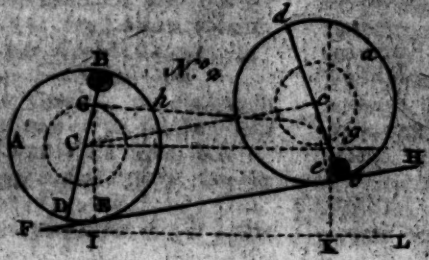


Fig. 8. CYLINDERS.

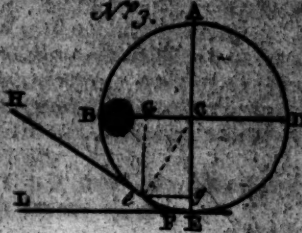
N.o 1.



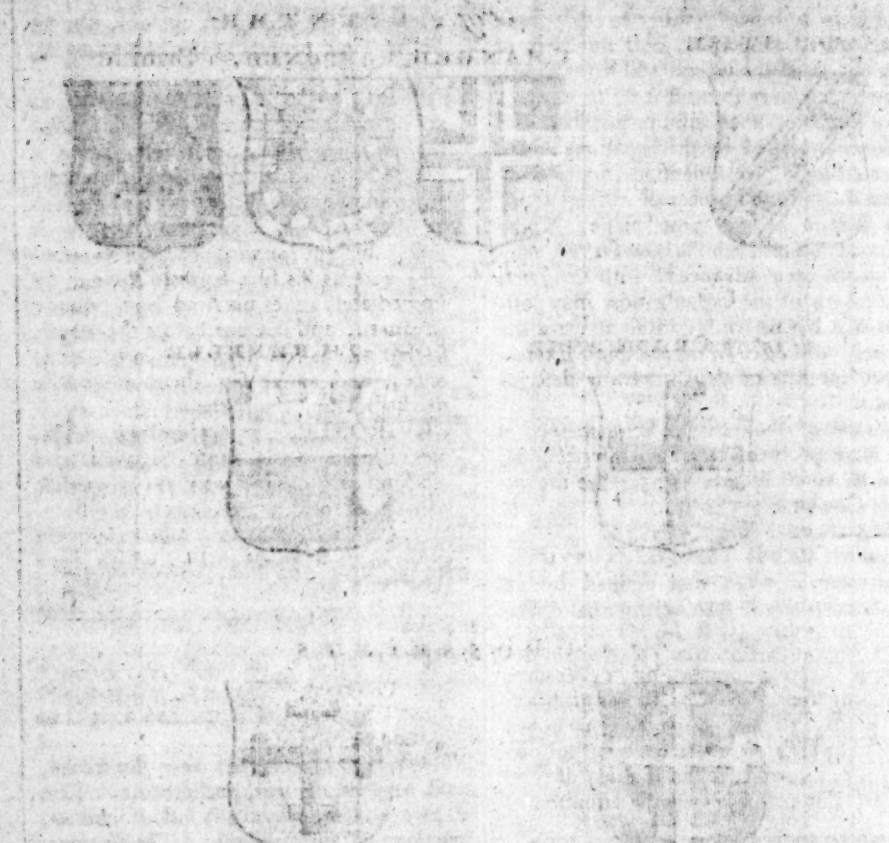
N.o 2.



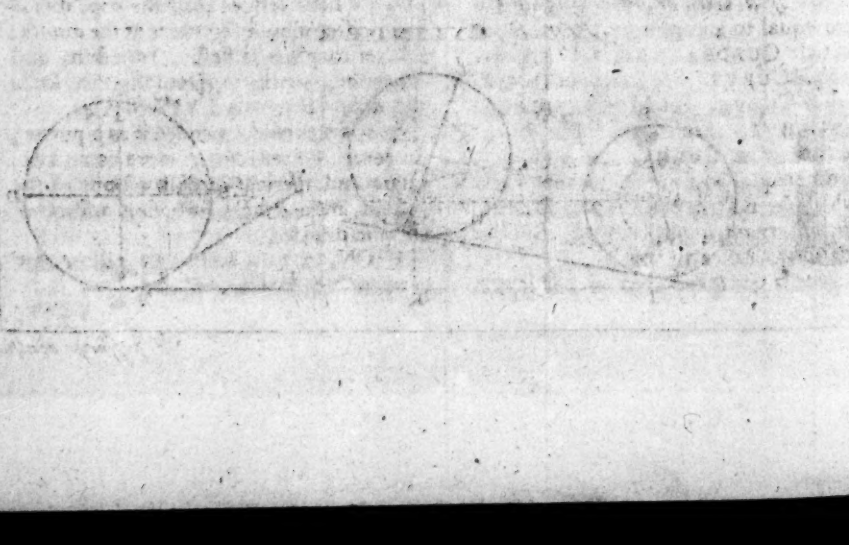
N.o 3.



T. Jefferys sculp.



BRITISH MUSEUM



As it is a difficult matter to underſtand the nature, properties, and numbers of the curves of the ſecond and third kinds, how much more ſo muſt it be to attain to a glimpſe of that infinite number and variety expreſſed by the equations of the ſucceeding higher dimenſions, not to mention the infinite number of curves which do not lie in the ſame plane. Thoſe who have a mind to ſee how far this doctrine has been advanced, with regard to the curves of the higher kinds, may conſult Mr. Maclaurin's treatiſe above-mentioned, and Mr. Brackonridge's Exercitatio Geometrica de Curvarum deſcriptione.

The uſe of theſe curves in geometry, is to ſolve problems by their interſections, and to conſtruct equations. See the article CONSTRUCTION.

Cauſtic CURVE. See CAUSTIC.

Diacauſtic CURVE. See DIACAUSTIC.

Exponential CURVE, that defined by an equation wherein is an exponential quantity, as $x^x a^x$, &c.

Family of CURVES, according to Wolfius, is a congeries of ſeveral curves of different kinds, all defined by the ſame equation of an indeterminate degree; but differently, according to the diverſity of their kinds. For example: let the equation of an indeterminate degree be $a^{m-1}x = y^m$. If $m=2$, ax will be equal to y^2. If $m=3$, then will $a^2x=y^3$. If $m=4$, then will $a^3x=y^4$, &c. all which curves are ſaid to be of the ſame family. The equations, however, by which the families of curves are defined, muſt not be confounded with tranſcendental ones; tho' with regard to the whole family they be of an indeterminate degree, yet with reſpect to each ſeveral curve of the family, they are determinate; whereas tranſcendental equations are of an indefinite degree with reſpect to the ſame curve.

Inflection of a CURVE. See INFLECTION.

Quadrature of a CURVE, the aſſigning a ſquare equal to a curvilinear ſpace. See the article QUADRATURE.

Logarithmic CURVE. See LOGARITHMIC.

Mechanical CURVE. See MECHANICAL.

Regular CURVE. See REGULAR.

Rectification of a CURVE, the finding a right line equal to a curve, for the praxis of which ſee RECTIFICATION, &c.

Characteriſtic triangle of a CURVE. See the article CHARACTERISTIC.

The geneſis and properties of particular curves, as the conchoid, cycloid, &c. ſee under their proper heads, CONCHOID, CYCLOID, &c.

CURVET, or CORVET, in the manege, an air in which the horſe's legs are raiſed higher than in the demi-volt; being a kind of leap up, and a little forwards, wherein the horſe raiſes both his fore-legs at once, equally advanced, (when he is going ſtraight forward and not in a circle) and as his fore-legs are falling, he immediately raiſes his hind-legs, equally advanced, and not one before the other: ſo that all his four legs are in the air at once; and as he ſets them down, he marks but twice with them.

CURVIROSTRA, in ornithology, a ſpecies of loxia, with the two chaps bent and croſſing each other; whence its engliſh name croſs-beak. See LOXIA.

CURVIROSTRA, in natural hiſtory, a name given to thoſe foſſile cockles which have their beak ſtanding not in the middle of the ſhell, but inclining to one or the other ſide.

CURULE CHAIR, in roman antiquity, a chair adorned with ivory, wherein the great magiſtrates of Rome had a right to ſit, and be carried.

The curule magiſtrates were the ædiles, the prætors, cenſors, and conſuls. This chair was fitted in a kind of chariot, whence it had its name. The ſenators who had borne the offices of ædiles, prætors, &c. were carried to the ſenate-houſe in this chair, as were alſo thoſe who triumphed, and ſuch as went to adminiſter juſtice, &c. See ÆDILE, &c.

CURULE STATUE. See the article STATUE.

CUSCO, the capital city of Peru, during the reigns of the incas: it is ſtill a fine city, and the ſee of a biſhop, and ſtands about 350 miles eaſt of Lima, in 70° weſt long. and 13° ſouth lat.

CUSCUTA, DODDER, in botany, a genus of the tetrandria-digynia claſs of plants, whoſe corolla conſiſts of a ſingle, ovated petal, a little longer than the cup, divided into four obtuſe ſegments at the mouth: the pericarpium is fleſhy, roundiſh, and bilocular, opening horizontally: the ſeeds are two. See plate LXIV. fig. 4.

The antients recommended it as a purge; however, we eſteem it more as an attenuant and aperient in obſtructions of the viſcera, in jaundices, dropſies, and other chronic diſeaſes.

CUSHION, a ſoft handſome pillow for perſons to ſit or lean upon.

CUSP,

CUSP, in aſtronomy, a term uſed to expreſs the points or horns of the moon, or other luminary.

CUSPIDATED PLANTS, in botany, are ſuch plants whoſe leaves are pointed like a ſpear.

CUSPIDATED HYPERBOLA, that whoſe points concur in the angle of contact, and there terminate. See HYPERBOLA.

CUSTODE ADMITTENDO, and CUSTODE AMOVENDO, are writs for the admitting or removing of guardians. See the article GUARDIAN.

CUSTOM, a very comprehenſive term, denoting the manners, ceremonies, and faſhions of a people, which having turned into a habit, and paſſed into uſe, obtains the force of laws; in which ſenſe it implies ſuch uſages, as, though voluntary at firſt, are yet, by practice, become neceſſary.

Cuſtom is hence, both by lawyers and civilians, defined *lex non ſcripta*, a law, or right, not written, eſtabliſhed by long uſage, and the conſent of our anceſtors: in which ſenſe it ſtands oppoſed to the *lex ſcripta*, or the written law.

As no law can bind people without their conſent, ſo, wherever that is had, and a certain rule uſed as a law, ſuch rule gives it the force of a law; and if it be univerſal, then it is common law: but if reſtrained to this or that particular place, it is cuſtom.

Cuſtom had its beginning, and received the ſanction of the law, thus: when a reaſonable act, once done, was found to be beneficial to the people, then they had frequent recourſe to it; and by repetitions thereof, it became a cuſtom, which being continued *ultra tritavum*, time out of mind, without any interruption, it obtained the power of a law, and binds the places, perſons, and things concerned therein.

All cuſtoms ought to have a reaſonable commencement, be certain, not ambiguous, have uninterrupted continuance, and not be againſt the king's prerogative: theſe are incidents inſeparable: yet a cuſtom is not unreaſonable for being injurious to private perſons and intereſts, ſo as it tends to the general advantage of the people: but if any cuſtom be contrary to the public good, or if it injures a multitude, and benefits only ſome certain perſons, ſuch a cuſtom is repugnant to the laws of reaſon, and conſequently void. Cuſtom muſt always be alledged in many perſons; and ſo it may be claimed by copyholders, or the inhabitants of a place, as within ſuch a county, hundred, city, borough, manor, pariſh, *&c.* but regularly they ſhall not alledge a cuſtom againſt a ſtatute: nor may cuſtom be pleaded againſt cuſtom; though acts of parliament do not always take away the force of cuſtoms. The general cuſtoms uſed throughout England, being the common law, are to be determined by the judges, who can over-rule a cuſtom that is againſt natural reaſon, *&c.* but particular cuſtoms are determinable by jury. See the article PRESCRIPTION.

CUSTOM *of London*. It is a cuſtom of London, that where a perſon is educated in one trade, he may ſet up another; that where a woman uſes a trade, without her huſband, ſhe is chargeable alone, as a *feme ſole* merchant, and if condemned, ſhall be put in priſon till ſhe pays the debt; likewiſe the bail for her are liable, if ſhe abſent herſelf, and the huſband, in theſe caſes, ſhall not be charged. If a debtor be a fugitive, by the cuſtom of London, he may be arreſted before the day, in order to find better ſecurity, *&c.* Theſe are cuſtoms of this city, different from thoſe of other places.

CUSTOM *of merchants*. If a merchant gives a character of a ſtranger to one who ſells him goods, he may be obliged to ſatisfy the debt of the ſtranger for the goods ſold, by the cuſtom of merchants. And when two perſons are found in arrears, upon an account grounded on the cuſtom of merchants, either of them may be charged to pay the whole ſum due, *&c.*

CUSTOMS, in commerce, the tribute or toll, paid by merchants to the king, for goods exported or imported: they are otherwiſe called duties. See DUTY.

Cuſtoms are ſaid to be due to the king of common right: firſt, becauſe the ſubject has leave to depart the kingdom, and to export the commodities thereof: ſecondly, becauſe of the intereſt that the king has in the ſea; that he is guardian of, and maintains all the ports, where the commodities are exported or imported: and, laſtly, becauſe the king protects merchants from enemies and pirates. Beſides the king's title to cuſtoms by common right, certain tonnage and poundage duties are, by act of parliament, granted him on wines, and all merchandize, goods, *&c.* The word cuſtoms comprehends *magna & antiqua cuſtuma*, payab . cu ſof our own native com-

commodities, as wool, leather, &c. and *parva cuſtuma*, are cuſtoms payable by merchants, ſtrangers, and denizens: theſe began in the reign of king Edward I. when the parliament granted him 3d. in the pound for all merchandizes exported and imported.

Anno 6 Edward III. it was enacted, that no new cuſtoms could be levied, nor old ones increaſed, but by authority of parliament. But though the king cannot lay new duties on merchandizes, without conſent of parliament, yet, by his prerogative, he may reſtrain merchants from trading, without his royal licence.

In caſe goods and merchandiſe are brought by a merchant to a port or haven, and there part of the goods are ſold, but never landed, they muſt nevertheleſs pay the cuſtoms. Ships outward bound, and coming from beyond ſea, having goods or merchandiſe on board, are to be entered at the cuſtom-houſe, and the cuſtoms paid, or agreed for, under penalties and forfeiture of the goods: one moiety to the king, the other to the ſeizor, &c. 12 Ch. II. cap. 4. And by other ſtatutes, ſince made, foreign goods, taken in at ſea by any other coaſting veſſel, &c. and run goods concealed, ſhall be forfeited, and treble value: and to prevent clandeſtine running of goods, if any foreign brandy, &c. is imported in veſſels under forty tuns, the importers ſhall forfeit the veſſel and brandy, 8 and 11 Geo. I. Where three perſons are aſſembled, and armed with fire arms, &c. to be aſſiſting in running goods, they ſhall be adjudged guilty of felony. Alſo two or more in company, found paſſing within five miles of the ſea-coaſt, with any horſes, carts, &c. whereon are put above ſix pounds of tea, or five gallons of brandy, or other foreign goods, of 30 l. value, landed without entry, and not having permits, who ſhall carry any offenſive weapons, &c. or aſſault any officer of the cuſtoms, ſhall be deemed runners of goods, be treated as felons, and the goods ſeized and forfeited. If any perſon offers any tea, brandy, &c. to ſale, without a permit, the perſons to whom offered may ſeize and carry it to the next warehouſe belonging to the cuſtoms or exciſe, and ſhall be entitled to a third part of the produce on condemnation, &c. 9 Geo. II. cap. 35.

The cuſtoms of goods exported and imported throughout England, are ſaid to amount yearly to 1,300,000 l. whereof thoſe of the port of London make one third part, ſome ſay, two thirds. The cuſtoms of England are very numerous, and very high; the principal are the duties of tonnage and poundage. See the articles TONNAGE and POUNDAGE.

CUSTOM-HOUSE, an office eſtabliſhed by the king's authority in maritime cities, or port towns, for the receipt and management of the cuſtoms and duties of importation and exportation, impoſed on merchandiſes, and regulated by books of rates.

There are ſeveral cuſtom-houſes in the ſeveral ports of England, but the moſt conſiderable is that of London. It is under the direction of commiſſioners, appointed by patent, who have the charge and management of all the cuſtoms in all the ports of England. Other officers are a ſecretary, ſolicitor, receiver-general, comptroller-general, ſurveyor-general, &c. all holding their places by patents, with other inferior officers, appointed by warrant from the board of the treaſury.

CUSTOM-OFFICERS ſhall not have any ſhips of their own, nor may they uſe merchandiſe, factorage, nor keep a tavern, &c. They are prohibited to trade in brandy, coffee, &c. or any exciſeable liquor, on pain of 50 l. For taking a bribe they ſhall forfeit 100 l. and 500 l. for making colluſive ſeizures, &c.

Every merchant, making an entry of goods, either inwards or outwards, ſhall be diſpatched in ſuch order as he cometh; and if any officer, or his clerk, ſhall, for favour or reward, put any merchant or his ſervant, duly attending to make entries, by his turn, to draw any reward or gratuity from him, beſides what is limited in the act of tonnage and poundage, &c. he ſhall be ſtrictly admoniſhed to his duty; or, if found faulty, he ſhall be diſcharged, and not permitted to ſit any more in the cuſtom-houſe. The officers who ſit above in the cuſtom-houſe of London, ſhall attend their ſeveral places, from nine to twelve in the forenoon; and one officer, or clerk, ſhall attend with the book, in the afternoon, during ſuch time as the officers are appointed to wait at the water-ſide.

CUSTOMARY TENANTS, in law, ſuch tenants as hold by the cuſtom of the manor, as their ſpecial evidence. Theſe were antiently bond-men, or ſuch as held *tenura bondagii*.

CUSTOS BREVIUM, the principal clerk belonging to the court of common pleas, whose buſineſs it is to receive and keep all the writs made returnable in that court, filing every return by itſelf; and, at the end of each term, to receive of the prothonotaries all the records of the niſi prius, called the poſteas.

The poſteas are firſt brought in by the clerks of aſſize of every circuit to that prothonotary who entered the iſſue in the cauſes, in order to enter judgment; and after the prothonotary has entered the verdict and judgment thereupon into the rolls of the court, he delivers them over to the cuſtos brevium, who binds them into a bundle. The cuſtos brevium makes likewiſe entries of writs of covenant, and the concord upon every fine: by him alſo are made out exemplifications and copies of all writs and records in his office, and of all fines levied, which being engroſſed, are divided between him and the chirographer, which laſt keeps the writ of covenant and the note; and the former the concord and foot of the fine. The cuſtos brevium is made by the king's letters patent.

CUSTOS ROTULORUM, an officer who has the cuſtody of the rolls and records of the ſeſſions of peace, and alſo of the commiſſion of the peace itſelf.

He uſually is ſome perſon of quality, and always a juſtice of the peace, of the quorum, in the county where he is appointed. This officer is made by writing under the king's ſign manual, being the lord chancellor's warrant to put him in commiſſion. He may execute his office by a deputy, and is empowered to appoint the clerk of the peace, but he may not ſell the place on divers penalties.

CUTICLE, *cuticula*, in anatomy, a thin membrane, cloſely lying upon the ſkin, or cutis, of which it ſeems a part, and to which it adheres very firmly, being aſſiſted by the intervention of the corpus reticulare. See the article RETICULARE CORPUS.

The cuticula, in living ſubjects, ſeparates from the ſkin in burns, and by means of bliſters: the colour of it, in Europeans, is white, but black in many other nations. As to its ſtructure and ſubſtance, it is compoſed of a multitude of very minute lamellæ, wherein are very numerous foraminula: the thickneſs of it is different in different parts of the body, but greateſt in the ſoles of the feet, and in the palms of the hands. The regeneration of the cuticle in living ſubjects is eaſy. All anatomiſts have failed in their attempts to find blood-veſſels in the cuticle; the abſence of which is the reaſon that it is without ſenſation. Its uſe is to defend the cutis from injury, from coming to contact with every thing, from dryneſs, and from pain, and finally to aſſiſt and at the ſame time to moderate the ſenſe of feeling. See the next article.

CUTIS, the SKIN, in anatomy, a robuſt membrane, as thick as a piece of ſtrong leather, extended over the whole ſurface of the body.

In this we are to conſider the connection which is double, its upper ſurface adhering to the corpus reticulare and the cuticle, and its under ſurface to the fat. In ſome places this connection is but lax, in others it is very firm. The thickneſs of the cutis is very different in ſeveral parts of the body, and as different in the ſkins of different animals, as appears from the leather made from it, for common purpoſes. It has a multitude of fulci, or lines, which are common to it with the cuticle. It has foramina of two kinds in it; the larger, ſuch as thoſe of the mouth, noſe, ears, and the like, tho' in effect the cutis may rather be ſaid to be reflected, than perforated, in thoſe parts; and the ſmaller, called pores: and theſe again are of different ſizes, ſome larger, ſome ſmaller, and ſerve to give paſſage to the hairs, to the tranſpiration, and to the ſweat. The pores are very large in the noſe, where the naked eye may ſee them.

As to the ſubſtance and ſtructure of the cutis, it is compoſed of a multitude of tendinous fibres, ſingle, tenacious, and interwoven in a ſurpriſing manner; of a vaſt number of blood-veſſels, and of a great number of nerves, which conſtitute the pyramidal papillæ, and raiſe themſelves through the pores of the corpus reticulare: theſe, when the cuticle is taken off, are very eaſily diſtinguiſhable in the palms of the hands and under the ſoles of the feet, and alſo at the ends of the fingers, where they conſtitute the primary organs of feeling. There are alſo the cutaneous miliary glands, ſerving for the excretion of the matters of perſpiration. Finally may be remarked the ſolliculi, or the receptacula cutanea, ſuppoſed, by Heiſter, to be the ſame as are deſcribed by other anatomiſts under the name of ſebaceous glands.

The uſes of the ſkin are numerous: 1.

To

To ſurround, cover, and defend the parts that lie underneath it. 2. To be the organ of feeling. 3. To be an univerſal emunctory to the body, cleanſing the blood of its redundancies, by the means of ſweat and perſpiration: while theſe, at the ſame time, ſerve to prevent the aridity or drineſs of the cutis itſelf.

CUTTER *of the tallies*, an officer of the exchequer, whoſe buſineſs is to provide wood for the tallies, to cut or notch the ſum paid upon them; and then to caſt them into court, to be written upon. See the article TALLY.

CUTTING, in coinage, the taking the planchets out of the laminæ, when they are reduced to the thickneſs of the ſpecies to be coined. See COINING.

CUTTING, in heraldry, is uſed for the dividing a ſhield into two equal parts, from right to left, parallel to the horizon, or in the feſſe-way. It is alſo applied to the honourable ordinaries, and even to animals, when they are divided ſo as that one part is metal, the other colour: an ordinary is ſaid to be cut, when it does not come to the full extremity of the ſhield.

CUTTING, or INTERFERING, in the manege, is when the feet of a horſe interfere, or when, with the ſhoe of one hoof he beats off the ſkin from the paſtern-joint of another foot. This is occaſioned by bad ſhoeing, wearineſs, weakneſs, or not knowing how to go, whereby the feet entangle.

CUTTING, in painting, the laying one ſtrong lively colour over another, without any ſhade or ſoftening. The cutting of colours hath always a diſagreeable effect.

CUTTING, in ſurgery, the operation of extracting the ſtone out of the human body by ſection. See the articles STONE and LITHOTOMY.

CUTTING *in wood*, a particular kind of ſculpture, or engraving, denominated from the matter whereon it is employed. See the article WOOD.

CUTTINGS, or SLIPS, in gardening, the branches or ſprigs of trees, or plants, cut or ſlipped off, to ſet again, which is done in any moiſt fine earth. The beſt time for this operation is from the middle of Auguſt to the middle of April; but when it is done, the ſap ought not to be too much in the top, leſt it die or decay before that part in the earth has root enough to ſupport the top; neither muſt it be very dry or ſcanty, for the ſap in the branches aſſiſts it to ſtrike roots: if done in the ſpring, let them not fail of water in the ſummer. In providing them, ſuch branches as have burs, knobs, or joints, are to be cut off, two or three inches beneath the burs, &c. and the leaves are to be ſtripped off ſo far as they are placed in the earth, leaving no ſide-branch: ſmall top ſprigs, of two or three years growth, are the beſt for this operation.

CUTTLE-FISH, the engliſh name of the ſepia of ichthyologiſts, called by ſome the ink-fiſh. See the article SEPIA.

CUVETTE, or CUNETTE. See the article CUNETTE.

CUYO, a diviſion of Chili, in South America.

CYANELLA, in botany, a genus of the hexandria monogynia claſs of plants, without any calyx; the corolla conſiſts of ſix oblong, concave patent petals, cohering at the ungues; the fruit is a roundiſh triſulcated capſule, conſiſting of three valves, and containing three cells: the ſeeds are numerous and oblong.

CYANUS, the BLUE-BOTTLE, in botany, makes a diſtinct genus of plants, according to Tournefort, but is comprehended by Linnæus among the centaurea. See the article CENTAUREA.

This plant is an alexipharmic and uterine. It is ſaid to be of uſe alſo in the king's evil, in palpitations of the heart; and a water diſtilled from it is of ſervice in inflammations of the eyes, &c.

CYATHUS, in roman antiquity, a liquid meaſure, containing four ligulas, or $\frac{1}{2}$ a pint engliſh wine-meaſure, being $0.469\frac{3}{4}$ ſolid inches. See MEASURE.

CYCAS, in botany, the name of a plant the characters of which are intirely unknown.

CYCLAMEN, SOW-BREAD, in botany, a genus of the pentandria-monogynia claſs of plants, the corolla of which conſiſts of a ſingle petal; the tube is ſubgloboſe, double the ſize of the cup; yet ſmall and nutant; the limb is large, and turns upwards, and is divided into five ovato-lanceolate ſegments; the fruit is a roundiſh berry, opening in five or ſix places at the top, and containing only one cell; the ſeeds are numerous, roundiſh, and angular. See plate LXV. fig. 2.

The root is a powerful aperient and abſtergent, is of uſe in obſtructions of the menſes, and in expelling a dead fœtus: but it is to be uſed with great caution.

CYCLE, κυκλος, in chronology, a certain period or ſeries of years, which regularly proceed from the firſt to the laſt, and then return again to the firſt, and circulate perpetually. See the article PERIOD.

The moſt conſiderable cycles are thoſe of the ſun, of the moon, and of the roman indiction.

The CYCLE *of the ſun* conſiſts of twenty-eight years, which contain all the poſſible combinations of the dominical letters, in reſpect to their ſucceſſive order, as pointing out the common years and leap-years; ſo that, after the expiration of the cycle, the days of the month return in the ſame order to the ſame days of the week, throughout the next cycle; except that upon every centeſimal year, which is not a leap-year, the letters muſt always be removed one place forward, to make them anſwer to the years of the cycle; for inſtance, if the year 1800 were a leap-year, as every centeſimal year is in the julian account, the dominical letters would be E D, and C would be the dominical letter of the next year: but as it is a common year in the gregorian account, D is the dominical letter of 1801, which anſwers to the eighteenth of the cycle, C to the nineteenth, *&c.* until the next centeſimal year. See DOMINICAL LETTER.

To find the year of this cycle for any year of the chriſtian æra, add 9 to the current year of Chriſt, becauſe the cycle commenced nine years before the chriſtian æra, and divide the ſum by 28, the quotient will ſhew the number of cycles which have revolved ſince the beginning of that in which the chriſtian æra commenced: and the remainder, if any, ſhews the current year of the cycle: but if there be no remainder, it ſhews that it is the laſt, or twenty-eighth year of the cycle.

The dominical letter of each year in this cycle, until the year 1800, appears by the following table.

1	D	C	5	F	E	9	A	G	13	C	B	17	E	D	21	G	F	25	B	A
2		B	6		D	10		F	14		A	18		C	22		E	26		G
3		A	7		C	11		E	15		G	19		B	23		D	27		F
4		G	8		B	12		D	16		F	20		A	24		C	28		E

CYCLE *of the moon*, or *Lunar* CYCLE, called alſo the *golden number*, is a period of nineteen years, after which the new and full moons return on the ſame days of the months, only one hour twenty-eight minutes ſooner: ſo that, on whatever days the new and full moon fall this year, they will happen nineteen years hence, on the ſame days of the months, except when a centeſimal common year falls within the cycle, which will move the new and full moons a day later in the calendar than otherwiſe they would have fallen, inſomuch that a new moon which fell before the centeſimal year, ſuppoſe on March 10, will fall nineteen years afterwards, on March 11.

The number of years elapſed in this cycle is called the prime, from its uſe in pointing out the day of the new moon, *primum lunæ*, and the golden number, as deſerving to be writ in letters of gold. See the article PRIME.

The golden numbers are thoſe placed in the firſt column of the calendar, betwixt March 21, and April 18, both inclusive, to denote the days upon which thoſe full moons fall, which happen upon, or next after, March 21, in thoſe years of which they are reſpectively the golden numbers. See the article CALENDAR.

For finding the golden number, add one to the current year of our Lord, becauſe one year of this cycle was elapſed before the chriſtian æra began, and divide by 19, the remainder is the current year of this cycle, or golden number; but if nothing remains, it ſhews that it is the laſt year of the cycle, and conſequently the golden number is 19.

CYCLE *of the roman indiction*, is a period of fifteen years, in uſe among the Romans, commencing from the third year before Chriſt. This cycle has no connection with the celeſtial motions; but was inſtituted, according to Baronius, by Conſtantine; who having reduced the time which the Romans were obliged to ſerve to fifteen years, he was conſequently obliged, every fifteen years, to impoſe, or *indicere*, according to the latin expreſſion, an extraordinary tax for the payment of thoſe who were diſcharged; and hence aroſe this cycle.

To find the cycle of indiction for any given year, add 3 to the given year, and divide the ſum by 15, the remainder is the current year of the cycle of indiction; if there be no remainder, it is the fifteenth or laſt year of the indiction.

Theſe three cycles multiplied into one another, that is 28×19×15, amount to 7980, which is called the julian period, after which the three foregoing cycles will begin again together. This period had its imaginary beginning 710 years before the creation, according to the common opinion among chronologers concerning the age of the world, and is not yet complete. It is much uſed in chrono-

logical

logical tables. See the articles EPOCHA and PERIOD.

CYCLIDIA, in zoology, a genus of animalcules of a roundiſh figure, without any limbs. See ANIMALCULE.

CYCLISCUS, in ſurgery, an inſtrument of the form of a half moon, uſed in ſcraping the ſkull, in caſe of fractures of that part. See FRACTURE.

CYCLOID, in geometry, a curve of the tranſcendental kind, called alſo the trochoid. It is generated in the following manner: if the circle C D H (plate LXV. fig. 1.) roll on the given ſtraight line A B, ſo that all the parts of the circumference be applied to it one after another, the point C that touched the line A B in A, by a motion thus compounded of a circular and rectilinear motion, will deſcribe the curve A C E B, called the cycloid, the properties of which are theſe: 1. If on the axis E F be deſcribed the generating circle E G F meeting the ordinate C K in G, the ordinate will be equal to the ſum of the arc E G and its right line G K; that is, C K will be equal to E G+G K. 2. The line C H parallel to the chord E G is a tangent to the cycloid in C. 3. The arch of the cycloid E L is double of the chord E M, of the correſponding arc of the generating circle E M F: hence the ſemicycloid E L B is equal to twice the diameter of the generating circle E F; and the whole cycloid A C E B is quadruple of the diameter E F. 4. If E R be parallel to the baſe A B, and C R parallel to the axis of the cycloid E F; the ſpace E C R, bounded by the arc of the cycloid E C, and the lines E R and R C, ſhall be equal to the circle area E G K: hence it follows, if A T, perpendicular to the baſe A B, meet E R in T, the ſpace E T A C E will be equal to the ſemicircle E G F: and ſince A F is equal to the ſemicircumference E G F, the rectangle E F A T, being the rectangle of the diameter and ſemicircumference, will be equal to four times the ſemicircle E G F; and therefore the area E C A F E will be equal to three times the area of the generating ſemicircle E G F. Again, if you draw the line E A, the area intercepted betwixt the cycloid E C A, and the ſtraight line E A will be equal to the ſemicircle E G F; for the area E C A F E is equal to three times E G F, and the triangle E A F = A F × ½ E F, the rectangle of the ſemicircle and radius, and conſequently equal to 2 E G F; therefore their difference the area E C A E is equal to E G F. 5. Take E *b* = O K, draw *b* Z parallel to the baſe, meeting the generating circle in X, and the cycloid in Z, and join C Z, F X; then ſhall the area C Z E C be equal to the ſum of the triangles G F K and *b* F X. Hence an infinite number of ſegments of the cycloid may be aſſigned, that are perfectly quadrable.

For example, if the ordinate C K be ſuppoſed to cut the axis in the middle of the radius O E, then K and *b* coincide; and the area E C K becomes in that caſe equal to the triangle G K F, and E *b* Z becomes equal to F *b* X, and theſe triangles themſelves become equal.

This is the curve on which the doctrine of pendulums and time-meaſuring inſtruments in a great meaſure depend; Mr. Huygens having demonſtrated that from whatever point or height a heavy body oſcillating on a fixed center begins to deſcend, while it continues to move in a cycloid, the time of its falls or oſcillations will be equal to each other. It is likewiſe demonſtrable, that it is the curve of quickeſt deſcent, *i. e.* a body falling in it, from any given point above, to another not exactly under it, will come to this point in a leſs time than in any other curve paſſing through thoſe two points. See the articles PENDULUM and OSCILLATION.

CYCLOIDAL, ſomething belonging to a cycloid. See the preceding article. Hence the cycloidal ſpace is the area bounded by the cycloid and its ſubtenſe.

CYCLOMETRY, a term ſometimes uſed for the menſuration of circles. See the article CIRCLE.

CYCLOPÆDIA, or ENCYCLOPÆDIA, denotes the circle or compaſs of arts and ſciences. A cyclopædia, ſay the authors of the french Encyclopedie, ought to explain, as much as poſſible, the order and connection of human knowledge.

Cyclopædias are generally in the form of dictionaries, where every branch of knowledge is reſolved into its conſtituent parts, the deſcription whereof is to be found under their reſpective articles. See the article DICTIONARY, and the Introduction to this work.

CYCLOPTERUS, the LUMP-FISH, in ichthyology, a genus of fiſhes of the order of the branchioſtegi: it is alſo called the ſea-owl, and by the Scots the cock-paddle.

It is diſtinguiſhed from other fiſhes of this order, by its belly-fins growing together in the form of a funnel. It is a

clumſy fiſh, being very thick in proportion to its length.

CYDER, or CIDER, an excellent drink made of the juice of apples, eſpecially the more curious table-kinds; the juice of theſe being eſteemed more cordial and pleaſant than that of the wild and harſh kinds, growing plentifully in the counties of Hereford, Worceſter, Glouceſter, *&c.* However, mixture of fruits is a great advantage to this liquor; the meaneſt apples mingled together making as good cyder as the beſt kinds alone: but the beſt mixture of all, according to Mr. Worlidge, is that of red-ſtreaks with golden rennets, obſerving always that they be of equal ripeneſs. It conduces greatly to the goodneſs of the cyder, to let the apples lie a week or two in heaps, before they are preſſed; in doing which every man may be freely left to the cuſtoms of his own native country: but a due management of the expreſſed juice is of the utmoſt importance. After ſtraining the liquor through a ſieve, let it ſtand a day or two in an open tun, covered only with a cloth, or boards, to keep out the duſt, that the more groſs parts may ſubſide. Then draw it off in pails into the veſſels, wherein it is intended to be kept, obſerving to leave an eighth part of them empty. Set theſe veſſels in your coldeſt cellars, with the bung open, or covered only with a looſe cover, both that the volatile ſteams may have free vent, and that the muſt may be kept cool, otherwiſe it is apt to ferment too much. Having fermented in this manner for fifteen or twenty days, the veſſel may be ſtopped up cloſe; and, in two or three months time, the cyder will be fit for drinking. But if you expect cyder in perfection, ſo as to flower in the glaſs, it muſt be glued, as they call it, and drawn off into bottles, after it has been a ſhort time in the caſk: this is done by pouring into each veſſel a pint of the infuſion of ſixty or ſeventy grains of the moſt tranſparent iſinglaſs, or fiſh-glue, imported from Archangel, in a little white-wine and river or rain-water, ſtirred well together, after being ſtrained through a linen cloth. When this viſcous ſubſtance is put into the caſk, it ſpreads itſelf over the ſurface like a net, and carries all the dregs to the bottom with it.

Ginger added to cyder, not only corrects its windineſs, but makes it more briſk; and a few drops of currant-juice, beſides tinging, adds a pleaſant quickneſs to it. Honey, or ſugar, mixed with ſome ſpices, and added to flat cyder, will very much revive it.

Some commend boiling of cyder-juice, which ſhould be done as ſoon as it is preſſed, ſcumming it continually, and obſerving to let it boil no longer than till it acquires the colour of ſmall beer: when cold, put it into a caſk, leaving a ſmall vent; and when it begins to bubble up out of the vent, bottle it for uſe.

CYDONIA, the QUINCE-TREE, in botany, is made by Linnæus a ſpecies of the pyrus. See QUINCE and PYRUS.

CYGNUS, the SWAN, in ornithology, a well-known water-fowl, ranked among the anas-kind. See the article ANAS.

The ſwan is a large and beautiful bird, of a ſnow-white all over; as is the wild ſwan, repreſented in plate LXIII. fig. 1. n° 2. only ſomewhat leſs in ſize: the head of the tame kind is repreſented, *ibid.* n° 1.

CYGNUS, in aſtronomy, a conſtellation of the northern hemiſphere, conſiſting of 17 ſtars according to Ptolemy's catalogue, of 19 in Tycho's, and in the Britannic catalogue of 107.

CYLINDER, in geometry, a ſolid body, ſuppoſed to be generated by the rotation of a parallelogram, as C B E F, about one of its ſides C F (plate LXII. fig. 8. n° 1.) If the generating parallelogram be rectangular, as C B E F, the cylinder it produces will be a right cylinder, that is, it will have its axis perpendicular to its baſe. If the parallelogram be a rhombus, or rhomboides, the cylinder will be oblique or ſcalenous.

Properties of the CYLINDER. 1. The ſection of every cylinder by a plane oblique to its baſe, is an ellipſis. 2. The ſuperficies of a right cylinder is equal to the periphery of the baſe multiplied into the length of its ſide. 3. The ſolidity of a cylinder is equal to the area of its baſe, multiplied into its altitude. 4. Cylinders of the ſame baſe, and ſtanding between the ſame parallels are equal. 5. Every cylinder is to a ſpheroid inſcribed in it, as 3 to 2. 6. If the altitudes of two right cylinders be equal to the diameters of their baſes, thoſe cylinders are to one another as the cubes of the diameters of their baſes.

To find a circle equal to the ſurface of a cylinder, we have this theorem: the ſurface of a cylinder is equal to a circle, whoſe radius is a mean proportional between the diameter and height of the cylinder. The diameter of a ſphere, and altitude of a cylinder equal thereto, being given, to find the diameter of the cylinder, the theorem is, the ſquare of the

diameter

BRITISH MUSEUM

Fig. 1. CYGNUS. the SWAN. *N.o 1.*

N.o 2.

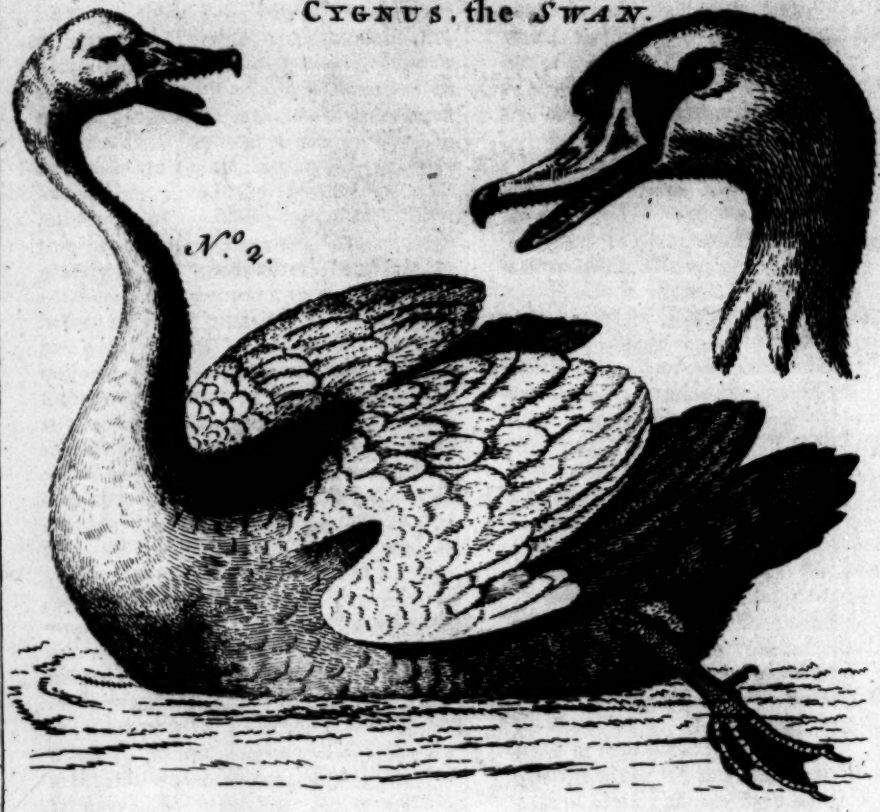


Fig. 2. COLUTEA.



J. Jefferys sculp.

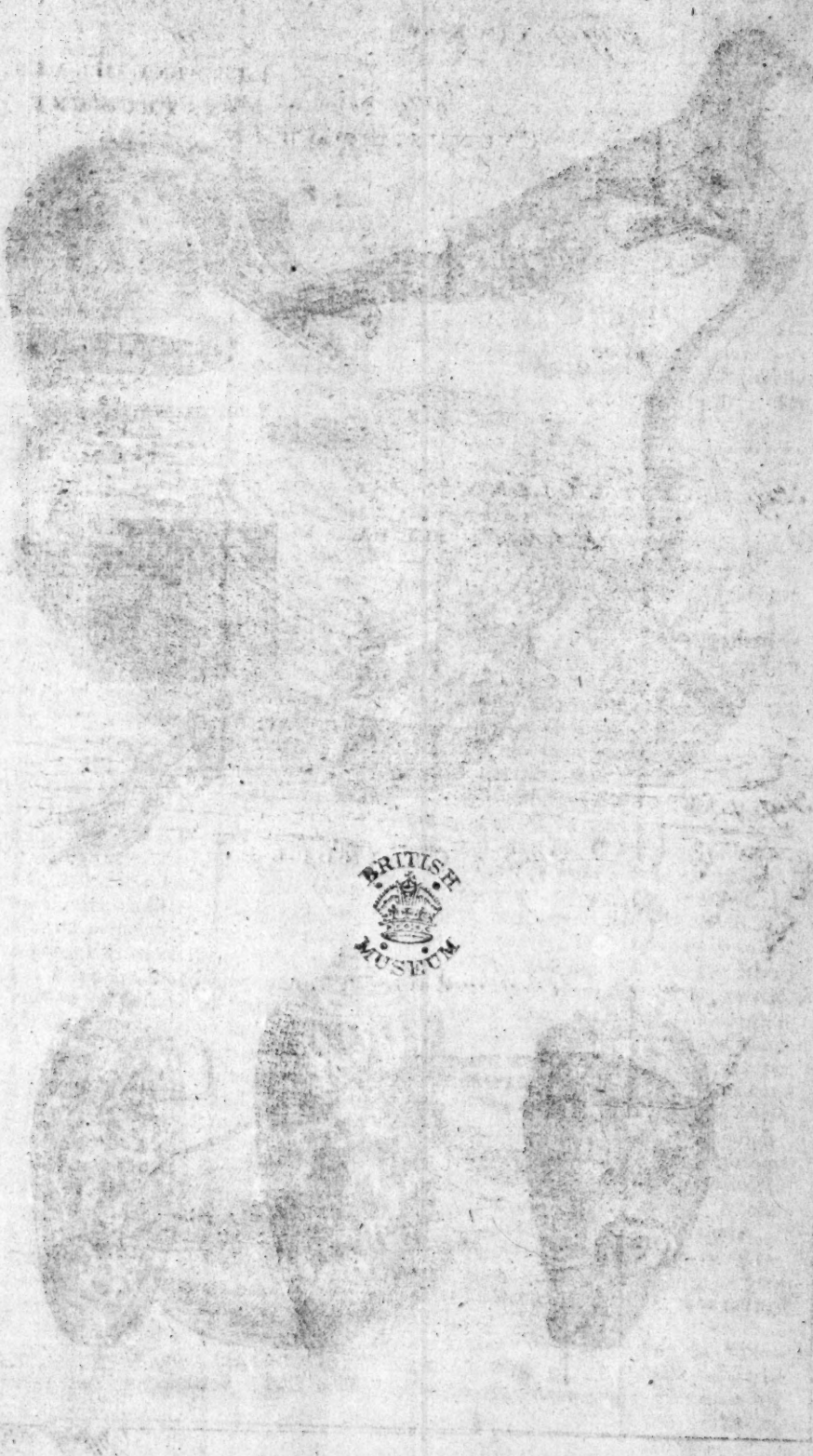

BRITISH MUSEUM

Fig. 1. CUCKOW.



Fig. 2. CUPPING-GLASS, & INSTRUMENT.



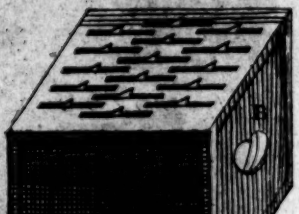


Fig. 3. CURLED-LEAF.



Fig. 6. CYPRÆA.



Fig. 4. CUSCUTA.



Fig. 5. CYLINDRUS.

N.o 1



N.o 2



N.o 3



J. Jefferys sculp.

diameter of the ſphere is to the ſquare of the diameter of the cylinder equal to it, nearly, as triple the altitude of the cylinder to double the diameter of the ſphere.

Rolling, or *loaded* CYLINDER, in philoſophy, a cylinder which rolls up an inclined plane. The phænomenon of the rolling cylinder may be eaſily accounted for, from what we have obſerved under CENTER *of gravity*. For let A B E D (plate LXII. fig. 8. n° 2.) repreſent a ſection of a cylinder of wood, biaſſed on one ſide with a cylindric piece of lead, as B; this will bring the center of gravity out of the center of magnitude C, to ſome point G, between C and B. Let F H be an inclined plane, whoſe baſe is F L. It is evident the cylinder laid upon the plane will no where reſt but there, where a perpendicular to the horizon F L, paſſes through the center of gravity G, and that point of the plane E, in which the cylinder touches it; and this in all angles of inclination of the plane, leſs than that whoſe ſine is equal to C G, the radius being C D. This will happen only in two ſituations, A B E D and *a b e d*; becauſe when the cylinder moves, the center of gravity deſcribing a circle round the center of magnitude C, this circle will meet the perpendicular in two points G and *g*, in each of which the center of gravity being ſupported, the cylinder will reſt. Therefore the cylinder moves from E to *e*, by the deſcent of the center of gravity from G to *g*, in the arch of the cyloid G *b g*.

If the cylinder A B E D (*ibid.* n° 3.) inſiſting on the horizontal line E L, in the point E, has the center of gravity G in the horizontal diameter D B, it will gravitate in the perpendicular G *e*. If therefore a plane F H touch the cylinder in the point *e*, it is plain the cylinder cannot either aſcend or deſcend on ſuch a plane; becauſe G, in any ſituation between *e* and H, or *e* and F, will gravitate to the left or right, from the point in which the cylinder touches the plane, and ſo will, in either caſe, bring it back to the point *e*.

Scenography of a CYLINDER. See the article SCENOGRAPHY.

CYLINDER-CHARGE, in gunnery, that part of a great gun which is poſſeſſed by the powder and ball.

CYLINDER-CONCAVE, in gunnery, is all the chace of a piece of ordnance.

CYLINDER-VACANT, in gunnery, is that part of the hollow that remains empty, after the gun is charged. See CANNON.

CYLINDROID, in geometry, a ſolid body, approaching to the figure of a cylinder, but differing from it in ſome reſpect, as having the baſes elliptical, but parallel and equal. See the article CYLINDER.

Hyperbolic CYLINDROID. See the article HYPERBOLIC.

CYLINDRUS, in natural hiſtory, a genus of ſhell-fiſh, the ſhell of which is ſimple, without a hinge, formed of one continued piece, and of a figure approaching to that of a cylinder. Its animal inhabitant is called limax. See LIMAX.

The clavicle of this ſhell is, in ſome ſpecies, continuous with the reſt of the ſhell; in others, it is divided from it by a kind of circle, and in ſome it is coronated. There are a great many very elegant ſpecies of it, as the brocade-ſhell, tulip-ſhell, porphyry-ſhell, letter-ſhell, *&c.* See plate LXIV. fig. 5. where n° 1. repreſents the tulip-ſhell, n° 2. the porphyry-ſhell, and n° 3. the gold-broad-ſhell.

CYMA, or CYMATIUM, in architecture. See the article CYMATIUM.

CYMA, in botany, the tender ſtalk which herbs ſend forth in the beginning of the ſpring, particularly thoſe of the cabbage-kind.

CYMATIUM, in architecture, a member, or moulding, of the corniche, the profile of which is waved, that is, concave at top, and convex at bottom. See the article CORNICHE.

Vitruvius does not confine the cymatium to the corniche, but uſes it indifferently for any ſimilar moulding, wherever he meets with it, in which he differs from the moſt accurate among the moderns. Felibien makes two kinds of cymatiums, the one right, and the other inverted. In the firſt, that part which projects the fartheſt is concave, and is otherwiſe called gula recta, and doucine: in the other, the part that projects fartheſt is convex, called gula inverſa, or ſalon. The engliſh architects do not uſually give the name cymatium to theſe mouldings, except when they are found on the tops of corniches; but the workmen uſe the name indifferently, wherever they are found.

Tuſcan CYMATIUM conſiſts of an ovalo or quarter-round. Philander makes two doric cymatiums, of which this is one. Baldus calls this the leſbian aſtragal.

Doric CYMATIUM is a cavetto, or a cavity leſs than a ſemicircle, having its projecture ſubduple to its height. See the article DORIC.

Leſbian CYMATIUM, according to Vitruvius, is what our architects otherwiſe call talon, *viz.* a concavo-convex member,

having its projecture ſubduple to its height.

CYMBAL, κυμβαλον, a muſical inſtrument in uſe among the antients. The cymbal was round, made of braſs, like our kettle-drums, and, as ſome think, in their form, but ſmaller, and of different uſe.

Caſſiodorus calls it acetabulum, *i. e.* a hollow piece, the name of a cup, or cavity of a bone, wherein another is lodged or articulated.

Authors compare cymbals to the lips, becauſe they formed ſounds by preſſing and ſtriking one againſt another, whence they muſt have been compoſed of two ſeveral parts. Ovid gives cymbals the epithet of *genialia*, becauſe they were uſed at weddings and other diverſions. The Jews had their cymbals, or, at leaſt, inſtruments which tranſlators render cymbals; but as to their matter and form, critics are ſtill in the dark. The modern cymbal is a mean inſtrument, chiefly in uſe among vagrants, gypſies, *&c.*

CYMBARIA, in botany, a genus of the didynamia-angioſpermia claſs of plants, the corolla of which conſiſts of a ſingle petal; the tube is oblong and ventricoſe; the limb ringent; the upper lip divided into two reflex and obtuſe ſegments; the lower lip in three obtuſe ſegments; the fruit is a roundiſh capſule, containing one cell, and divided by two valves; the ſeeds are numerous, ſmooth, and angulated.

CYNÆDUS, in ichthyology, a ſpecies of labrus, of a yellow colour, with a purple-coloured back, and the back-fin reaching from the head to the tail.

CYNANCHE, among phyſicians, denotes an inflammation of the larynx. See the article QUINZY.

CYNANCHUM, in botany, a genus of the pentandria-digynia claſs of plants, the flower of which conſiſts of one petal, divided into five long and linear ſegments at the edge: the fruit is made up of two oblong and acuminated follicles, which form only one cell, wherein are numerous oblong ſeeds, crowned with down.

CYNANTHROPIA, in medicine, the diſtemper occaſioned by the bite of a mad dog, wherein the patient avoids the light and every thing that is bright, and dreads the water ſo much, that he trembles at the ſight or even the remembrance of it. See HYDROPHOBIA.

It is communicated to a perſon by the bite of any animal, as a dog, wolf, *&c.*

CYNARA, the ARTICHOAK, in botany, a genus of the ſyngeneſia-polygamia-æqualis claſs of plants, the compound flower of which is tubulated and uniform, and the hermaphrodite flowers almoſt equal; the proper flower is monopetalous and funnel-formed; the fruit is naked; the cup a little connivent; the ſeed is ſingle, oblongo-ovated, quadragono-compreſſed, and crowned with a long ſeſſile down. See plate LXV. fig. 5.

The uſe of artichoaks, as a food, is well known. Among phyſicians, both the head and root are recommended as aperitive, and therefore good in ſuppreſſions of urine and the jaundice: it is alſo ſaid to be a provocative to venery, and to cure barrenneſs.

CYNICS, a ſect of antient philoſophers, who valued themſelves upon their contempt of riches and ſtate, arts and ſciences, and every thing, in ſhort, except virtue or morality.

The cynic philoſophers owe their origin and inſtitution to Antiſthenes of Athens, a diſciple of Socrates, who, being aſked of what uſe his philoſophy had been to him, replied, "It enables me to live with myſelf." Diogenes was the moſt famous of his diſciples, in whoſe life the ſyſtem of this philoſophy appears in its greateſt perfection: he led a moſt wretched life, a tub having ſerved him for a lodging, which he rolled before him, wherever he went; yet he was, nevertheleſs, not the more humble on account of his ragged cloak, bag, and tub; for, one day, entering Plato's houſe, at a time that there was a ſplendid entertainment there, for ſeveral perſons of diſtinction, he jumped up upon a very rich couch, in all his dirt, ſaying, "I trample on the pride of Plato." "Yes (replied Plato) but with great pride, Diogenes." He had the utmoſt contempt for all the human race, for he walked the ſtreets of Athens, at noon-day, with a lighted lantern in his hand, telling the people, "He was in ſearch of a man." Amongſt many excellent maxims of morality, he held ſome very pernicious opinions; for he uſed to ſay, that the uninterrupted good fortune of Harpalus, who generally paſſed for a thief and a robber, was a teſtimony againſt the gods. He regarded chaſtity and modeſty as weakneſſes; hence Laertius obſerves of him, that he did every thing openly, whether it belonged to Ceres or Venus, though he adds that Diogenes only ran to an exceſs of impudence to put others out of conceit with it: but impudence was the characteriſtic of theſe philoſophers, who argued, that what was right to be done, might be done at all times, and in all places. The

chief

BRITISH MUSEUM

Fig. 1. CYCLOID.

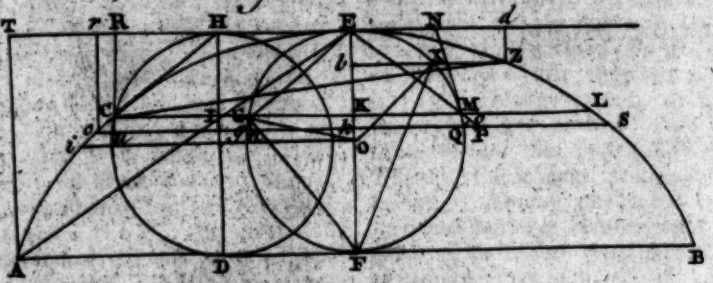


Fig. 2. CYCLAMEN.



Fig. 3. CYNOGLOSSUM.

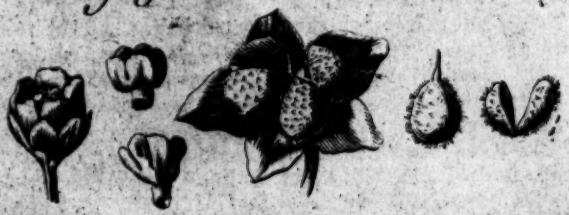


Fig. 4. CYPERUS.



Fig. 5. CYNARA.



T. Jefferys sculp

BRITISH MUSEUM

Fig. 1. SPOTTED CUCKOW.

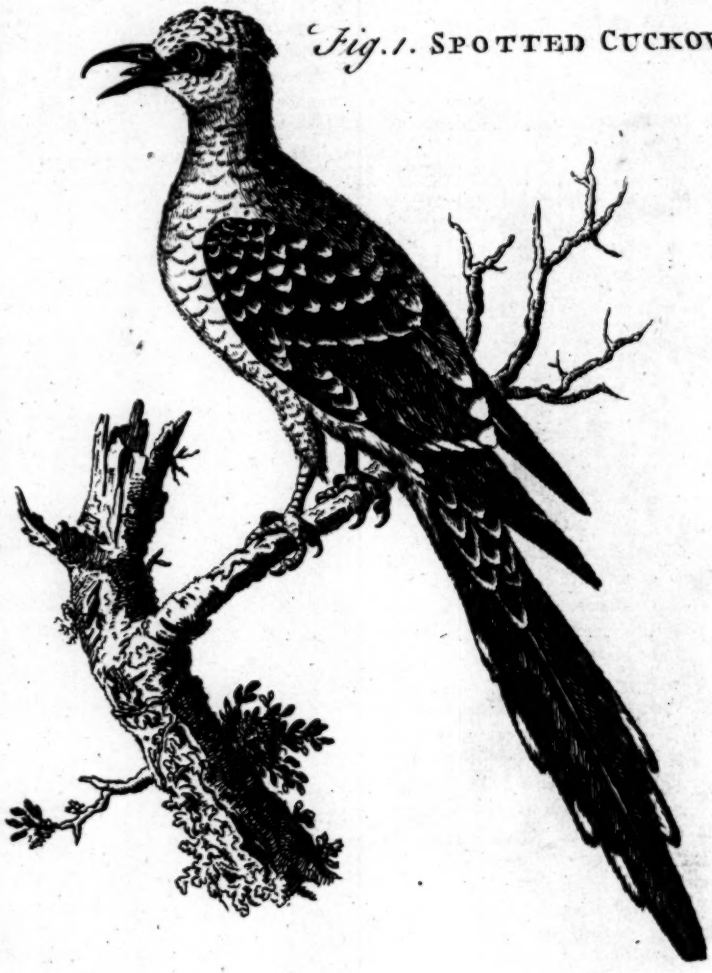
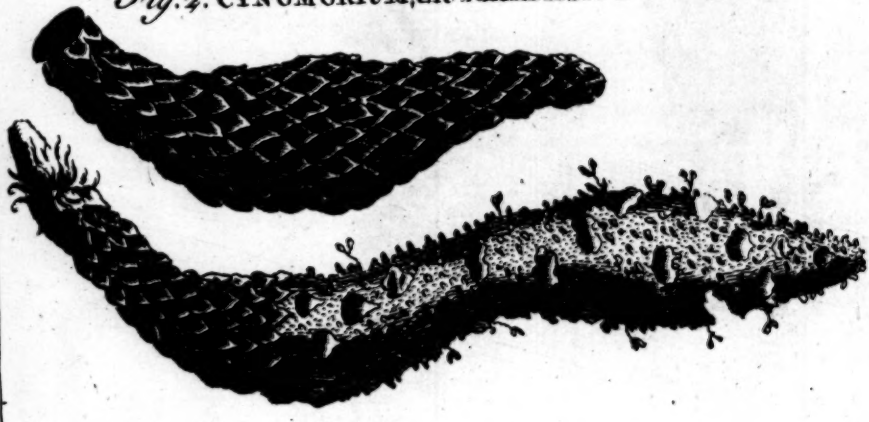


Fig. 2. CYNOMORIUM, the *MALTESE FUNGUS.*



J. Jeffreys sculp.

chief principle of this ſect, in common with the ſtoics, was, that we ſhould follow nature; but they differed from the ſtoics in their explanation of that maxim, the cynics being of opinion that a man followed nature, that gratified his natutal motions and appetites; while the ſtoics underſtood right reaſon, by the word nature.

CYNIC SPASM, a kind of convulſion, wherein the patient imitates the howlings of dogs. See CONVULSION.

CYNIPS, in zoology, a genus of four-winged flies, of the hymenoptera-order, armed with a conical aculeus, or ſting, at the tail.

CYNOCEPHALUS, in zoology, a name given to the larger monkeys, with a long noſe, and a head reſembling that of a dog: theſe are uſually called, in engliſh, baboons.

CYNODESMUS, among anatomiſts, the ſame with frænum. See FRÆNUM.

CYNOGLOSSUM, HOUND'S TONGUE, in botany, a genus of the pentandria-monogynia claſs of plants, whoſe corolla conſiſts of a ſingle petal, of the length of the cup; the tube is cylindric, and ſhorter than the limb, which is divided into five obtuſe ſegments; the fruit conſiſts of four roundiſh depreſſed capſules; the ſeed is ſingle, of an oval figure, gibbous, acuminated, and ſmooth. See plate LXV. fig. 3.

Its roots is kept in the ſhops, and is eſteemed a pectoral and narcotic.

Some recommend it in catarrhs, the gonorrhœa, and ſcrophulous caſes.

CYNOGLOSSUS, in ichthyology, a fiſh of the pleuronectes-kind, with the eyes on the right, and the anus on the left ſide, and furniſhed with ſharp teeth. See the article PLEURONECTES.

CYNOMETRA, in botany, a genus of the decandria-monogynia claſs of plants, the cup of which is divided into four ſegments; and the fruit is a fleſhy lunated pod, containing a ſingle ſeed.

CYNOMORIUM, MALTESE FUNGUS, in botany, a genus of the monoecia-monandria claſs of plants, the flower of which is amentaceous; the female floſcules being mixed with the male ones on ſome plants, and ſcarce removed from them, and neither having any corolla; the fruit is naked, and the ſeed ſingle and roundiſh. See plate LXVI. fig. 2.

This plant is a very powerful aſtringent.

CYNOMUIA, the DOG-FLY, in zoology. See the article DOG-FLY.

CYNOREXY, among phyſicians, the ſame with bulimy. See the article BULIMY.

CYNOSURA, in aſtronomy, a name given by the Greeks to the conſtellation of urſa minor. See the article URSA.

This is the conſtellation next to the north pole.

CYNOSURUS, DOG'S TAIL GRASS, in botany, a genus of the triandria-digynia claſs of plants, whoſe corolla conſiſts of two valves; the exterior concave, longer, and ariſtated; the interior, plane, without any ariſta: the corolla ſurrounds the ſeed, which is ſingle, of an oblong figure, and pointed at each end.

CYON, or CION, among gardeners. See the article CION.

CYPERUS, in botany, a genus of the triandria-monogynia claſs of plants, having no corolla, nor any pericarpium; the ſeed is ſingle, of a triquetrous form, acuminated, and having no villi or hairs. See plate LXV. fig. 4.

The roots of this plant are carminative and attenuant; they promote the menſes, and are good in all chronic caſes, ariſing from obſtructions of the viſcera.

CYPHER, or CIPHER. See CIPHER.

CYPHOMA, CYPHOS, or CYPHOSIS, an incurvation of the ſpine, forming a crookedneſs in the back. See SPINE.

CYPHONISM, in grecian antiquity, a puniſhment inflicted upon criminals, by faſtening a collar of wood round their necks, which conſtrained them to keep their heads bowed down: ſome ſay, the neck, hands, and feet were fettered or incloſed within it. See KINOPHONISM.

CYPRÆA, a kind of ſnail-ſhells, of an oval contorted figure, and with a longitudinal aperture.

To this genus belong the concha veneris and the moneta guineenſis, the former of which is repreſented in plate LXIV. fig. 6.

CYPRESS, *cupreſſus*, the engliſh name of a genus of trees. See CUPRESSUS.

Summer-CYPRESS, the ſame with the chenopodium of botaniſts. See the article CHENOPODIUM.

CYPRINUS, in ichthyology, a very comprehenſive genus of fiſhes of the order of the malacopterygii, the characters of which are theſe: the branchioſtege membrane on each ſide contains three ſmall bones; the mouth is toothleſs, except that towards the orifice of the ſtomach there are two ſerrated bones, which ſerve inſtead of teeth.

This is a very numerous genus, comprehending the roach, tench, carp, gudgeon, barbel, chub, bream, bleak, &c.

CYPRIPEDIUM, LADIES SLIPPER, in botany, a genus of plants of the gynandria-

nandria-diandria claſs, the flower of which conſiſts of four or five very long, erect, and narrow petals; the fruit is an oval unilocular capſule, containing a great number of minute ſeeds.

CYPRUS, an iſland ſituated in the moſt eaſterly part of the Levant, or Mediterranean ſea, between 33° and 36° eaſt longitude, and between 34° and 36° north latitude.

It is about one hundred and fifty miles long and ſeventy broad, and is ſubject to the Turks.

Knights of CYPRUS, an order inſtituted by Guy de Luſignan, titular king of Jeruſalem, to whom Richard I. of England, after conquering this iſland, made over his right.

Theſe knights were alſo denominated knights of ſilence, and knights of the ſword.

CYRENAICS, *cyrenaici*, a ſect of antient philoſophers, ſo called from their founder, Ariſtippus of Cyrene, a diſciple of Socrates.

The great principle of their doctrine was, that the ſupreme good of man in this life is pleaſure; whereby they not only meant a privation of pain and a tranquillity of mind, but an aſſemblage of all mental and ſenſual pleaſures, particularly the laſt. See the article EPICUREAN.

CYST, the bag, or tunic, including all incyſted tumors, as the ſchirrus, atheroma, ſteatoma, meliceres, &c. See the articles SCIRRHUS, ATHEROMA, &c.

If in extracting an incyſted tumour, the including cyſt be broke, or wounded, care muſt be taken to remove it, otherwiſe the tumour will ſpeedily return. See the article *Encyſted* TUMOURS.

Indeed if the tumour be a ſcirrhus, ſarcoma, ſteatoma, or in a glandular part, the contents are hard enough to make a clean extirpation of it, notwithſtanding its including coats be wounded: but when the matter of the tumour is ſoft or fluid, by its eſcaping, the tumour will become flaccid, ſo that it will hardly be poſſible to make a clean extirpation of the cyſt, without leaving ſome fragment behind, which muſt in that caſe be brought away by dreſſing the abſceſs with digeſtives, &c. See the article ABSCESS.

CYSTIC, a name given to two arteries and two veins, opening into the gall bladder. The cyſtic arteries, *cyſticæ gemellæ*, are two arteries proceeding from the right branch of the cœliac; and that trunk of the vena porta, which goes into the liver affords the cyſtic veins.

CYSTIC DUCT, *cyſticus ductus*, a pipe that goes into the neck of the cyſtis, or gall-bladder, into which ſome bilious ducts likewiſe open, and through which the greater part of the bile is evidently carried into the cyſtis, in human ſubjects.

CYSTIC BILE, one of the two kinds of bile, being diſtinguiſhed into the cyſtic and hepatic bile. See the article BILE.

The cyſtic bile is very bitter, thicker, and more coloured than the hepatic.

CYSTIS, in anatomy, the ſame with veſicula, or bladder. See BLADDER and VESICULA.

CYTISUS, SHRUB-TREFOIL, in botany, a genus of plants of the diadelphia-decandria claſs, with a papilionaceous flower, and an oblong, obtuſe, and rigid pod for its fruit, wherein are a few compreſſed and kidney-like ſeeds. The leaves of cytiſus are eſteemed cooling and diſcutient.

CYZICENS, *cyzicena*, a ſort of magnificent banquetting-houſes, among the antient Greeks, ſo called from Cyzicus, a city famous for its ſumptuous buildings. The cyzicens always looked to the north, opened into pleaſant gardens, and were the ſame as the triclinia and cœnacula were at Rome.

CZAR, a title of honour aſſumed by the great dukes, or, as they are now ſtiled, emperors of Ruſſia.

Beeman makes no doubt but they took this title, by corruption, from cæſar, emperor; and, accordingly they bear an eagle, as the ſymbol of their empire, and the word CÆSAR in their arms: yet they make a diſtinction between czar and cæſar, the firſt being taken for the king's name, and the other for the emperor's. The firſt that bore this title was Baſil, the ſon of Baſilides, under whom the ruſſian power began to appear, about 1470.

CZERNIGOF, the capital of the province of Czernigof, in Ruſſia, near the frontiers of Poland: eaſt long. 31° 30′, and north lat. 52° 30′.

CZERSKOW, a town of Warſovia, in Poland, ſituated on the river Viſtula, about thirty miles ſouth of Warſaw: eaſt long. 21° 30′, and north lat. 52° 30′.

CZONGRODT, a town of Hungary, ſituated on the river Thieſſe, about thirteen miles north of Segedin: eaſt longitude 20° 45′, and north latitude 46° 36′.

MVSEVM BRITANNICVM

END of the FIRST VOLUME.

Collated & Perfect
J. R.
1783.